

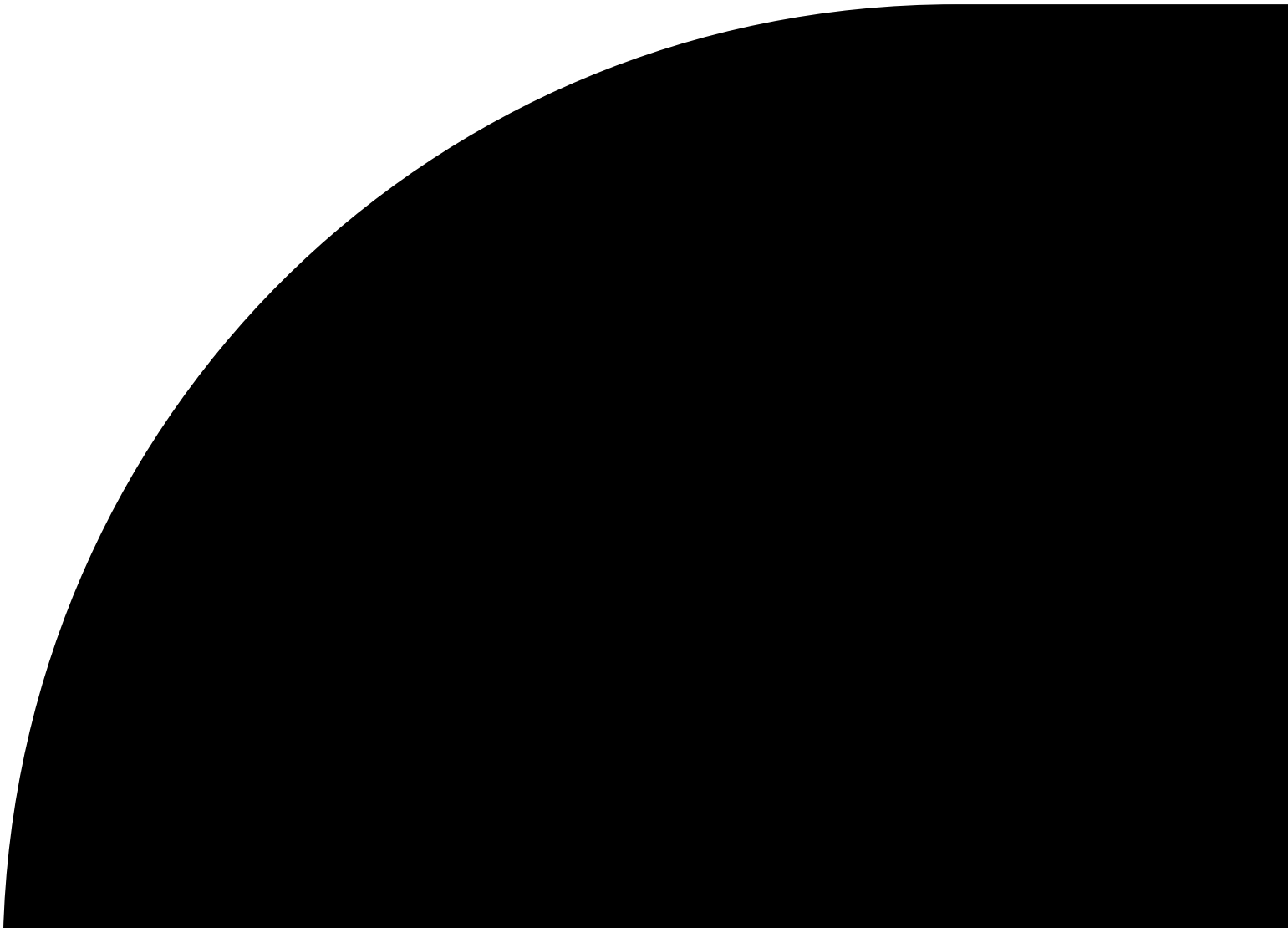


# **Deliverable 1**

**DXC report for The Ohio Bureau of Workers' Compensation  
Managed Care Organization Impact Study**

**RFP DABWC-18-EP-002**

**12<sup>th</sup> December, 2018**



# **Deliverable 1: Quantitative and Qualitative Report Identifying Impacts that MCOs have had on the Ohio Workers' Compensation System**

# 1 EXECUTIVE OVERVIEW

Ohio's Bureau of Workers' Compensation (BWC) is the largest state-funded insurance system in the U.S., insuring approximately 60% of Ohio's workforce. In 2017, the Bureau of Workers' Compensation administrative budget was \$280.7 million. 86,290 state fund claims were filed with the Ohio BWC during the same year<sup>1</sup>. The State of Ohio Bureau of Workers' Compensation, through the Health Partnership Program (HPP), contracts with managed care organizations (MCOs) to medically manage injured worker claims. The goal of the MCOs is to facilitate return to work (RTW) management services while promoting the delivery of high quality, cost effective medical care that focuses on minimizing the physical, emotional, and financial impact of a work-related injury or illness and promotes a safe return to work.<sup>2, 3</sup> Combining and leveraging the strengths of the public and private sectors, the HPP was intended to enhance operational efficiency and meet the BWC's strategic goals. Through this model for workers' compensation, injured workers and employers benefit from the competition and innovation of the private sector while the BWC provides guidance and oversight to ensure objectives of the HPP are met. This report examines the financial impacts, clinical quality, RTW outcomes, stakeholder satisfaction, and perceived managed care operational ability in the Ohio workers' compensation (WC) system.

Containment of costs without compromising care, quality, appropriate RTW, or satisfaction is complicated and requires coordinated efforts of all parties to a claim, which is why appropriate measurement of outcomes and savings are required. Throughout the time period the HPP has been in place, the cost of workers' compensation claims has increased nationally at a substantially faster pace than US healthcare costs.<sup>4</sup>

<i>Goals of Deliverable 1 as Stated in Project RFP</i>		
BWC RFP Exploratory Project Solicitation DABWC-18-EP-002	Deliverable 1 title, RFP pg. 16	"Quantitative and qualitative report: Impacts that MCOs have had on the Ohio workers' compensation system"

This report provides quantitative and qualitative analyses on specific variables salient to evaluating the impacts MCOs have had on the Ohio BWC system. The quantitative portion measures cost, quality, and RTW through the lens of selected injury types with meaningful MCO involvement including: low back pain, knee arthroscopy, and shoulder sprains or strains. These injuries represent 50% of missed days, 20% of claims, and embody a continuum of injury severity impacting all workforce sectors in the state. The qualitative portion measures injured worker and employer satisfaction and interested party perception of MCO operational ability.

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<sup>1</sup> "FY 2017 Annual Report."

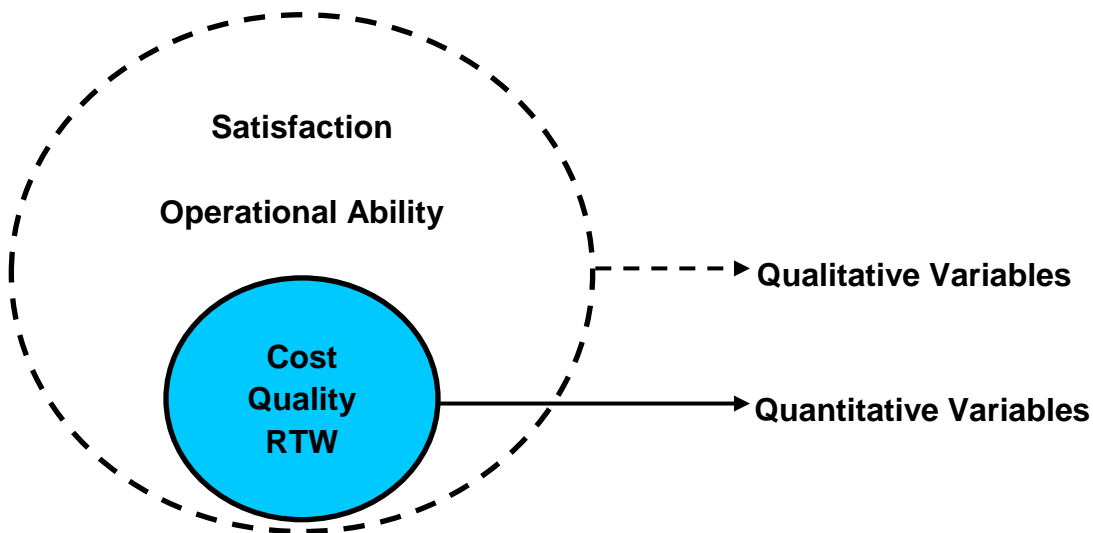
<sup>2</sup> Ohio Revised Code: 4121.44

<sup>3</sup> "BWC 1991 Strategic Plan."

<sup>4</sup> "Medical Costs Trends: Then and Now."

These variables were chosen because they relate directly to the goals and objectives of the Health Partnership Program.

Cost, quality, and RTW outcomes were chosen for quantitative analysis because of their alignment with BWC goals and ability to be objectively quantified using concrete methods of calculation and analysis. These variables were analyzed using a method that models and compares claims of a similar injury group to determine relative cost and quality performance, termed an “episode of care.” An episode of care is defined as a set of services rendered for a specific clinical injury or illness. Satisfaction and operational ability—or the ability of MCOs to perform the functions prescribed by the HPP—were measured using qualitative methods as these variables are less able to be quantified. As illustrated in the following figure, the qualitative variables, while more abstract, provided context for the more concrete quantitative variables.



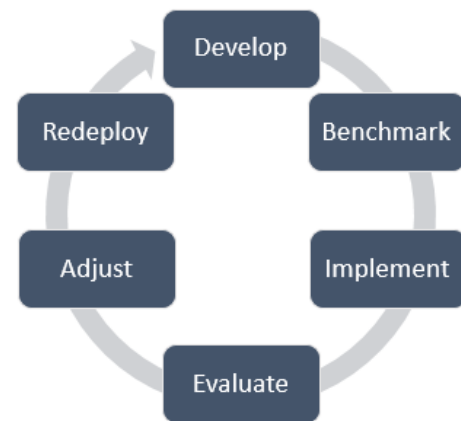
Cost, quality, and RTW outcomes associated with high-impact medical conditions were evaluated using data extracted from over 117,000 episodes of care covering workers injured in the state of Ohio between 2012 and 2017. Evaluations used an episodic approach in which some of the most common and/or costly injuries in the Ohio BWC (low back pain, shoulder sprains and strains, and knee arthroscopy) were analyzed to determine financial cost trends, quality metric performance, and RTW outcomes over the past five years. These episodes of care were designed with specific, relevant quality metrics for each injury to enable verification that cost containment and RTW efforts did not come at the expense of delivering quality care. Analyses were designed to focus specifically on claims with meaningful MCO involvement to evaluate impacts of medical management on potentially challenging cases. Satisfaction and operational value were measured using surveys and in-depth interviews with key stakeholders and interested parties.

MCO medical management of injured worker claims indicate positive performance on cost, quality, RTW, and satisfaction. Data collected from national and state-specific

comparisons show that Ohio's workers' compensation claims have improved in terms of both process and outcome-related metrics since the inception of the HPP. Ohio BWC claims exhibit lower costs and recovery time than the national average overall. Detailed spend analyses of injuries examined with episodes of care demonstrate significant improvements in the past five years. Estimated annual medical savings on lost time claims for the three episodes are nearly \$2,000,000 annually. Importantly, these savings have been realized while performance on every measured quality metric has improved. Financial performance improvements exhibit patterns identified in the industry literature as being sources of opportunity for improvement, suggesting that Ohio's approach to claim and medical management is enabling alignment with recommended strategies to improve value of care. Savings are likely to originate from the combined effects of indemnity payments, utilization review, and changing patterns of medical practice and negotiated fee schedules.

### Recommendations:

- Conduct a satisfaction survey of injured workers and employers once every one to two years to measure changes in satisfaction over time and ensure that satisfaction levels are maintained or improved. These surveys would be completed and results reported shortly before open enrollment. We recommend two year cycles for this survey so that results can be reported alongside open enrollment. The purpose of these surveys would be to give an overall pulse of satisfaction with the managed care environment and with specific MCOs.
- Consider development of episodes of care for high-risk conditions (high incidence, high risk for negative outcomes and/or high cost). Performance analyses can be enhanced through the inclusion of quality measures that focus on specific care-priorities to permit evaluation of cost without loss of focus on quality of care.
- Performance in quality measures and episodes can be communicated with MCOs, employers and injured workers to help drive competition and assist in MCO selection.
- Continue use of detailed analytics to support the development of benchmarking data sets for baseline evaluations and to set future goals to continue driving improved performance.



*Lifecycle of development, use and continued optimization of quality-driven, patient-centered outcome measures.*

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## 3 DELIVERABLE 1 OVERVIEW

### 3.1 Report Aims

The aims of this deliverable, as described in the RFP and statement of work, are to provide a qualitative and quantitative evaluation of MCO impact on the quality and value of medical care delivered in the workers' compensation system. This deliverable output will be incorporated with an evaluation of MCO impacts on RTW to inform Deliverable 3: Evaluation of the Current Methods for MCO Performance Measurement.

- **QUALITATIVE:** Utilizing data collection and analytical methods, provide insight into the impacts of MCOs on the perceived experience and outcomes of BWC stakeholders and key interested parties.
- **QUANTITATIVE:** DXC will conduct an independent analysis of cost and quality of the medical care delivered via MCOs to Ohio's injured workers as well as MCO-led RTW efforts.

#### Abbreviations & Acronyms

Abbreviation	Definition
ADR	Alternative Dispute Resolution
BLS	U.S. Bureau of Labor Statistics
BWC	Bureau of Workers' Compensation
CSS	Claims Service Specialist
DoDM	Degree of Disability Measurement
EDI	Electronic Data Interchange
EPI	Exceptional Performance Indicator
FROI	First Report of Injury
IC	Industrial Commission
IW	Injured Worker
HPP	Health Partnership Program
LDW	Last Day Worked
LBP	Low Back Pain
MCO	Managed Care Organization
MoD	Measurement of Disability
ODG	Official Disability Guidelines
RTW	Return to Work
SOM	Service Office Manager
SOW	Statement of Work



URAC	Utilization Review Accreditation Commission
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## 4 BACKGROUND

The Ohio Bureau of Workers' Compensation began contracting with MCOs in 1997 as part of the HPP. Since the inception of the HPP there have been improvements in many facets of the program, both in terms of the MCO management of claims and to the system overall. The goal of this report is to measure the impacts that MCOs have had on value, quality of care, and RTW through medical management of Ohio BWC claims. As with any medical payment system, the number of variables and parties involved in each transaction presents difficulty in attributing overall changes to any one entity or policy change. This is especially true given that over the previous 20 years since MCOs have been introduced to Ohio's workers' compensation system, many policies and procedures have also been introduced that have affected cost, quality, RTW outcomes, stakeholder satisfaction, and MCO operational ability. However, given how fundamental MCOs are to medical management of claims, we argue that if MCOs were not bringing value to the system, we would not see as much improvements in those areas.

Ohio's MCOs represent just one part of the larger BWC system, composed of many parties taking concerted action to work toward the goal of reducing the negative impacts of workplace injury. Individual roles, groups, or policy changes may seem to be only a small piece of the puzzle, and changes observed in any large care delivery system are rarely due to the work of a single party. However, the accumulation of small positive changes taken by each of the interacting entities build over years of improvement.

Overall, positive change is undeniable when looking at the cumulative system-wide improvements seen since the inception of the HPP. The intent of the HPP was to improve system wide performance metrics through outsourcing the task of medical management to contracted MCOs, enabling the BWC to focus on all other components of claims management. This arrangement was expected to permit the BWC and MCOs to both improve, resulting in stronger process and performance metrics in the MCO environment and in the BWC system overall. Ohio's employers and injured workers have benefitted from the following system-wide improvements since the inception of HPP:

- Reduction in claims processing times: FROI timing reduced by 58 days; from 74 days in 1991 <sup>5</sup> to 16.07 days in 2017 <sup>6</sup>.
- Reduction in injury incidence and severity and decrease of \$361,690,801.00 in the amount of benefits paid annually (between 1991 and 2017).

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<sup>5</sup> "FY1991 Annual Report."

<sup>6</sup> "FY 2017 Annual Report."

Clearly, such metrics are beyond what MCOs could achieve alone, but they indicate that BWC has taken the opportunity to fine-tune and continuously improve work in all arenas, while working with MCOs to advance the quality and efficiency of both medical management and processing of claims. Ultimately, this demonstrates that the HPP has been valuable even beyond the MCO environment and benefitted injured workers and employers in Ohio.

This report will focus specifically on the MCO environment, knowing that improvements extend beyond their role alone. We will seek to gain greater insight into the impact of MCOs and on the goals and objectives of the HPP through both quantitative and qualitative data analysis methods.

## 4.1 Historical Context

Throughout the 1980s and 1990s, the number of workers' compensation claims increased sharply while costs to cover each claim rose due to medical inflation, additional condition coverage, and increased benefit levels. Despite the increased claim costs, political considerations kept employer premium rates artificially low, creating major financial concerns for both public and private insurers.<sup>7</sup> Even in the context of this challenging environment, Ohio struggled more than many states in the nation, delivering lower than average care while charging above average premiums.<sup>8</sup>

Understandably, performance suffered in many areas: FROI timing was 74 days, the Bureau had an accumulated deficit of over 6 billion dollars, and nearly 40% of the calls to BWC offices went unanswered. As a result, in the early 1990s the Ohio BWC was not viewed as the state asset that it is today, but a "silent killer of jobs," making Ohio less competitive than neighboring states for attracting new business.<sup>9</sup> The findings of a study commissioned by Governor George Voinovich to evaluate the Bureau summarized the problem at the time by saying, "The BWC's current levels of performance are unacceptable. Injured workers feel that the process takes too long. Extensive delays and backlogs characterize most of the BWC's operations, and Ohio's employers perceive that workers' compensation costs are too high."<sup>10</sup> In response, the BWC published a strategic plan indicating the intent to "reorganize and streamline its operations to implement greater focus on customer service and efficient management of BWC operations." Modifications sought to improve service, quality, timeliness, and cost effectiveness by restructuring BWC operations to make it run more like a private insurance company and less like a state agency.<sup>11</sup> Proposed solutions included hiring additional staff, decentralizing operations, and introducing skilled, multidisciplinary case management teams.

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<sup>7</sup> Avila, "McKinsey & Company Report on Ohio BWC Operational Restructuring."

<sup>8</sup> Ibid.

<sup>9</sup> "FY 2012 Annual Report."

<sup>10</sup> Avila, "McKinsey & Company Report on Ohio BWC Operational Restructuring."

<sup>11</sup> "BWC 1991 Strategic Plan."

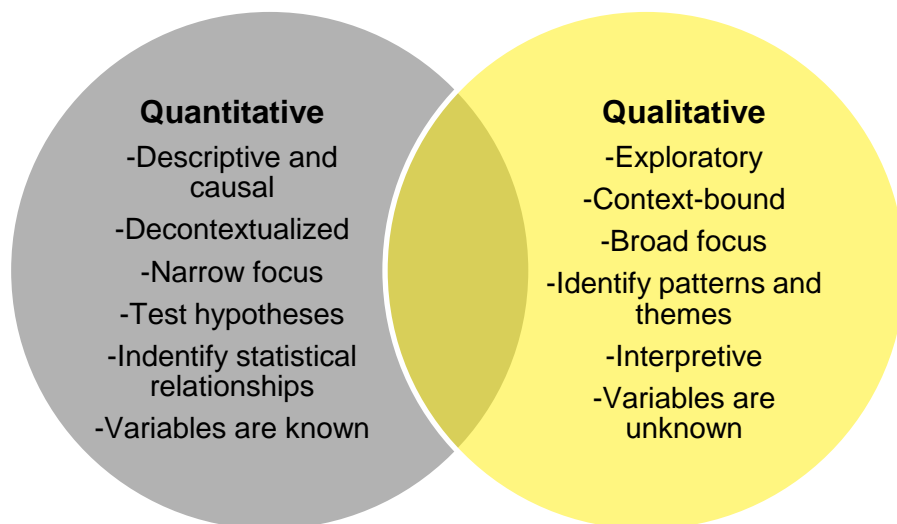
Although improvements were made over the next several years, it was recommended that the BWC accelerate the pace of performance enhancements by leveraging private sector capabilities, specifically through contracting with multiple MCOs to augment claims management and introduce a competitive environment. The primary goal was to “improve customer service and implement cost containment programs and provide pro-active and cost-effective customer service.”<sup>12</sup> This report will present DXC’s findings on the impact of this managed care environment on workers’ compensation in Ohio through an analysis of five key variables: cost, quality, RTW outcomes, stakeholder satisfaction, and MCO operational ability.

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<sup>12</sup> “BWC 1991 Strategic Plan.”

## 5 STUDY DESIGN

This study includes both quantitative and qualitative research methods. While these methods require different approaches to study design, data collection, and analysis, they each have the potential to provide important insight and knowledge into the case being studied.



### 5.1 Qualitative Study Design

The qualitative portion of this study sought to collect a breadth of perspectives and knowledge from multiple interested parties and institutions to assess the value added to Ohio's workers' compensation system by MCOs. Two key data collection methods were used: surveys and in-depth interviews. This section will detail how these methods were used as organized by study group.

Surveys were conducted either over the phone (for injured workers) or email (for all other study groups). The industry standard response rate—meaning the rate at which individuals who were recruited to complete a survey actually did complete the survey—for telephone surveys is between 7% and 9%<sup>13, 14</sup> while the standard response rate for email surveys has a much wider range depending on if the population is internal or external. An internal population is generally considered employees, while an external population is considered customers. For this study, we will consider internal populations to be MCO staff and BWC staff. External populations include: lawyers, employers' associations, labor unions, third party administrators (TPA), vocational (Voc) rehabilitation providers, medical providers, employers, and injured workers. If the population is internal, the response rate is generally between 30% and 40%. If the population is external, the response rate is generally between 10% and 15%.<sup>15, 16</sup> In addition to response

<sup>13</sup> <http://www.pewresearch.org/2017/05/15/what-low-response-rates-mean-for-telephone-surveys/>

<sup>14</sup> <https://news.gallup.com/opinion/methodology/225143/listening-state-telephone-surveys.aspx>

<sup>15</sup> <https://www.surveymizmo.com/resources/blog/survey-response-rates/>

<sup>16</sup> <https://surveyanyplace.com/average-survey-response-rate/>

rate, measuring confidence levels and margins of error also tell us how reliable our sample sizes are in inferring statistically significant responses; even if the response rate is low, a high confidence level (95% or higher) and low margin of error (4% or lower) will allow us to infer appropriate conclusions from the data.

*Injured Workers.* 7,344 injured workers were contacted by telephone to participate in a satisfaction survey for this study. Injured workers eligible for inclusion in the study were those who had filed an approved claim, within the five-year window prior to the study start date, while employed by a state-insured employer. All participants were off work due to their injury, however the distribution of claim types represented in the study population was set to 90% lost time (>7 days absence) and 10% medical only (< 7 days absence). This distribution was selected to ensure that the population would primarily be composed of injured workers likely to have had an interaction with their managed care organization during recovery, rehabilitation and/or return to work. A population of injured workers meeting the study inclusion criteria was selected at random from BWC records and contacted by telephone to be invited to participate in the study. In total, 593 injured workers representing both lost time and medical only claims completed the telephone survey (response rate = 8.07%, CL = 95%, MoE = 4%).

*Employers.* 211,519 emails were sent to state-insured employers. These employers were chosen based on the availability of email contact information. 1,915 completed the survey (response rate = 0.91%, CL = 95%, MoE = 2.5%). While the response rate is comparatively low to the number of employers invited to participate, the confidence level and margin of error are adequate to infer accurate results.

*Third Party Administrators.* 124 emails were sent to TPA staff based on the availability of email contact information. 27 TPA staff members completed the survey (response rate = 21.77%, CL = 90%, MoE > 10%). While the response rate for this group was acceptable, the low confidence level and high margin of error tell us that we cannot extrapolate from these responses. However, we can still use them for thematic insight into the managed care environment when contextualized with other survey results.

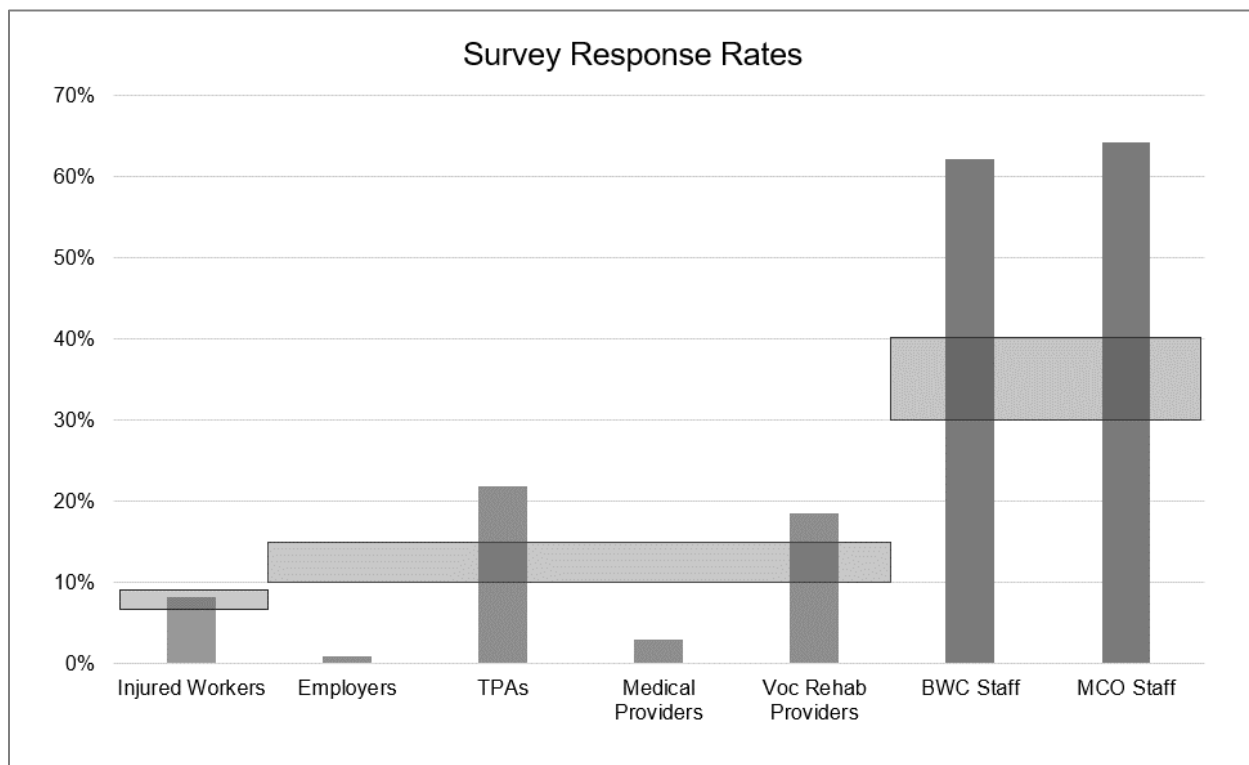
*Medical Providers.* 13,389 emails were sent to medical providers and medical offices. These providers and offices were selected based on the availability of email contact information and their certification as BWC-approved providers. 385 providers or provider office staff members completed surveys (response rate = 2.88%, CL = 95%, MoE = 5%). Because the response rate for this group is representationally low and the margin of error is high, we cannot rely on it for statistically significant conclusions. However, we can use the responses for general insight in combination with the other surveys.

*Vocational Rehabilitation Providers.* 287 emails were sent to vocational rehabilitation providers based on the availability of email contact information and certification with the BWC. 53 providers completed the survey (response rate = 18.47%, CL = 95%, MoE > 10%). Like the medical provider and TPA surveys, the margin of error is high. This means the results from this survey can only be used for insight purposes rather than for statistically significant conclusions.

*BWC Operations Staff.* This survey was sent to the office managers of each BWC regional office with the request that it be distributed to IMS supervisors, intake CSSs, RTW CSSs, RAW CSSs, and rehab DMCs. These individuals were chosen based on their involvement on claim-level work alongside MCO staff. A total of 296 individuals were contacted for survey participation, and 184 of them completed the survey (response rate = 62.16%, CL = 95%, MoE = 4%).

*MCO Operations Staff.* 1,153 emails were sent to current MCO employees based on email contact information. We also used a “snowball” survey method, meaning asking respondents to forward the survey to their coworkers to ensure that all MCO staff had an opportunity to participate. This explains why some MCOs have higher respondent counts than invitation counts. Staff members in administrative assistance and IT positions were not included in the population count as they do not have direct interaction with claims work. 740 staff members completed the survey (response rate = 64.18%, CL = 95%, MoE = 2%).

Survey response rates play a key role in data validity and reliability. A response rate must be high enough to reasonably infer results from the survey to the study group population. The following chart shows the response rates for each of the surveys, grouped by survey type (telephone, external email, and internal email). The shaded boxes represent the ranges typically considered standard for their respective survey type.



In addition to response rate, we are also concerned with confidence level and margin of error. The following table shows which surveys achieved our desired confidence level of 95% and margin of error of less than 4%:

	95% Confidence Level	Margin of Error ≤ 4%
Injured Workers	X	X
Employers	X	X
TPAs		
Medical Providers	X	
Voc Rehab Providers	X	
BWC Staff	X	X
MCO Staff	X	X

As illustrated in this chart and table, all surveys, excluding employers and medical providers, reached a reasonably appropriate response rate; and all surveys, excluding TPAs, medical providers, and vocational rehab providers, met our desired CL and MoE metrics. From this analysis, we can conclude that the following surveys contain responses that can be extrapolated onto their respective populations, allowing us to draw statistically significant conclusions:

- Injured workers
- Employers
- BWC Staff
- MCO Staff

The remaining surveys (TPAs, medical providers, and voc rehab providers), while not yielding statistically valid responses, can still be used to provide important insights into the managed care environment when contextualized with other survey responses to seek common themes in feedback.



In addition to surveys, DXC also conducted in-depth, semi-structured interviews. These interviews lasted approximately 15 minutes to an hour. They were guided by a set of questions, but deviations from prepared questions were considered appropriate when the interviewee had experience or interest in a specific operational area. Interviews were conducted with the following parties:

- BWC Board of Directors
- BWC Administrative Staff
- MCO Executive Level Staff
- Workers' Compensation Lawyers
- Employers' Association Representatives
- Labor Union Representatives

## **Ethics**

As with any human subject research, ethical implications of surveys and interviews were taken into consideration. First, injured workers were not asked for any protected health information. Second, all survey and interview participants were provided with an informed consent form explaining their rights as research subjects, including their right to withdraw from the study at any time without any negative consequences. Third, while interviews were recorded for transcription services, recordings were not released to BWC. Fourth, all raw data provided to BWC from surveys and interviews, including survey question responses and interview transcripts, were de-identified to eliminate the possibility of identifying the participating individual.

## 5.2 Quantitative Study Design

Episodes of care are intended to group together a set of medical conditions that have a similar course of care and patient journey. Episode data can be analyzed to create comparisons between populations or to identify trending patterns in major variables such as outcomes and costs. Episodes data can also provide baseline performance data for monitoring and evaluation in future years. For this study, episodes of care were employed to observe changes in outcomes and costs over time in Ohio's BWC claims population. The primary focus of this evaluation was identification of potential impacts that medical case management has had on the costs, quality, and recovery profile of injured worker claims in Ohio.

**Data included in study:** Episodes were built using Ohio BWC claims data for allowed injury claims occurring between January 1, 2012 and December 31, 2017. To ensure complete and consistent billing data, the analysis was limited to claims managed by state-contracted MCOs and excluded claims under self-insured employers or black lung/marine fund claims. Episodes were identified based on the presence of a claim having a bill containing a confirming diagnosis or procedure code for the conditions of interest in a paid header or detail invoice line (complete code ICD-9/ICD-10 and CPT list for episode triggers provided in appendix).

A standardized approach to Episodes of Care Development is broken down into a stepwise model. Each dimension of the stepwise model is associated with a set of data manipulations that convert the data inputs to the desired data outputs. Clinical overview and typical patient journey guides the unique and detailed episode specific implementations within the framework of the broader agnostic design algorithms.

Episode development starts by pre-filtering data that meets potential episode specific codes used to identify potential triggers. The pre-filtered data then enters the stepwise model used for episode creation. The first design dimension in the stepwise model is the identification of episode specific trigger codes that satisfy the logic requirements of what events trigger an episode.

The second design dimension defines the duration of the episode. The episode duration is established through the assignment of the first diagnosis triggering the episode as the beginning of trigger window, from there the pre-trigger window, post-trigger window, and pre/post opioid windows are parametrized.

The third design dimension identifies that bill to be included in the episode spend. The bills are then assigned to the respective episode windows dependent upon the time when the bill occurred.

The fourth design dimension calculates a non-risk adjusted episode spend broken out into specific bill categories, as well as bill category type per episode window.

The fifth design dimension assigns a responsible MCO for an episode, meaning the entity best positioned to influence the patient journey and the decisions made throughout the course of the episode at any site of care is identified.

The sixth design dimension identifies excluded episodes. An episode is excluded from a patient panel when the patient has clinical factors or comorbidities that suggest a distinct patient journey (e.g., trauma) and/or that drive significant increases in spend relative to the average patient (e.g., select cancers, HIV or in this case, specific injuries such as back pain, knee arthroscopy or shoulder injuries). In addition, there are several “business-related” exclusions. These exclusions are factors relating to reimbursement policy (e.g., whether a patient sought care out of state), the completeness of spend data for that patient (e.g., third party liability or dual eligibility), and other topics relating to episode design and implementation (e.g. overlapping episodes) during the comparison period. Episodes that have no exclusions are known as “valid” episodes and are the episodes that are used for provider comparisons. In contrast, episodes with one or more exclusions are “invalid” episodes.

The seventh design dimension identifies the responsible MCOs for the episode that meet quality metrics. Quality metrics are calculated for each individual principal accountable provider across valid episodes attributed to the principal accountable provider. The quality metrics are based on information contained in the medical bills filed for each patient unique to each episode type.

The last two design dimensions include the algorithms for calculating number of absence days for each episode and the indemnity amounts broken out per benefit type. Upon completion of the stepwise model, all design dimensions are merged and populated into the respective columns in episode output tables.

**Development of quality metrics (QM) used for comparison of medical management and care coordination:** Quality of care evaluation incorporated clinical best practice and cost-containment guidelines associated with identified conditions. Each set of quality metrics were designed to help identify medical management that incorporates techniques known to be high-impact and to encourage the use of high-value services while minimizing use of low-value or high-risk practices. Quality metrics were previously evaluated through Ohio physician peer-review of aggregated clinical practice guidelines from numerous professional associations and medical literature sources. Quality metrics for use in this study were proposed by DXC and reviewed in consultation with Ohio BWC SMEs for their potential utility as fair and reliable proxy indicators of quality care. Episode-specific QMs permit a population-level evaluation of specific inflection points with the potential to impact the outcomes or course of care for a set of conditions and can serve as an indicator of quality medical case management. Quality metrics are specific to the medical episodes but share common characteristics that primarily fall into three major categories: metrics related to imaging, opioids or, conservative high-value medical management.

Imaging related: Most patients with occupational low back pain do not require imaging. Evidence suggests that early and unindicated imaging is associated with adverse effects among the workers' compensation population in particular. In that population, early magnetic resonance imaging (MRI) in the absence of a clinical indication has been associated with patient harm, including unnecessary testing and treatments (e.g., injections and surgery), higher costs, increased lost work time, and disability.<sup>17, 18, 19</sup>

Opioid related: Episodes are designed to evaluate the use of opioids throughout the injured worker's journey and to compare opioid use at specific times across all members of an episode. The assignment of opioid claims to a window prior to the triggering diagnosis is challenging in the BWC environment however, time windows used were designed as follows to evaluate the use of opioids at different times relative to the injury data and episode triggering diagnosis or procedure:

1. Before the episode trigger.
  - a. Defined as the time between the date of injury and the time of the episode triggering diagnosis or procedure.
2. After the episode trigger
  - a. Defined as the time between the episode trigger and either A) Return-to-work or B) The passage of 60 days after the episode triggering diagnosis. For knee arthroscopy episodes, the first 30 days after the knee arthroscopy procedure were not included in this measurement and opioids were measured in days 31-60 after the triggering knee arthroscopy procedure.
3. Opioid prescribing during both of the above windows

Clinical practice guidelines do not seek to eliminate opioid use altogether, but to promote safe and focused use in specific clinical scenarios in which alternative pain treatments are not appropriate. Roles of medical case managers in claims can be instrumental in reducing the population level use of opioids through development of a longer-term care plan including a drug transition plan, which is to be reviewed by both patients and care providers.

Use of conservative, incremental treatments or avoidance of high-cost, low-value therapy: These quality metrics include evaluation of the following:

1. Repeat exacerbations that result in return trips to the emergency department within two weeks of the episode trigger.
2. Use of MRI multiple times, or without prior use of conservative imaging modalities.
3. Alternative strategies to control pain such as epidural injections of corticosteroids for back pain. There is some debate surrounding the efficacy of steroid injections for lumbar

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<sup>17</sup> Webster and Cifuentes, "Relationship of Early Magnetic Resonance Imaging for Work-Related Acute Low Back Pain with Disability and Medical Utilization Outcomes."

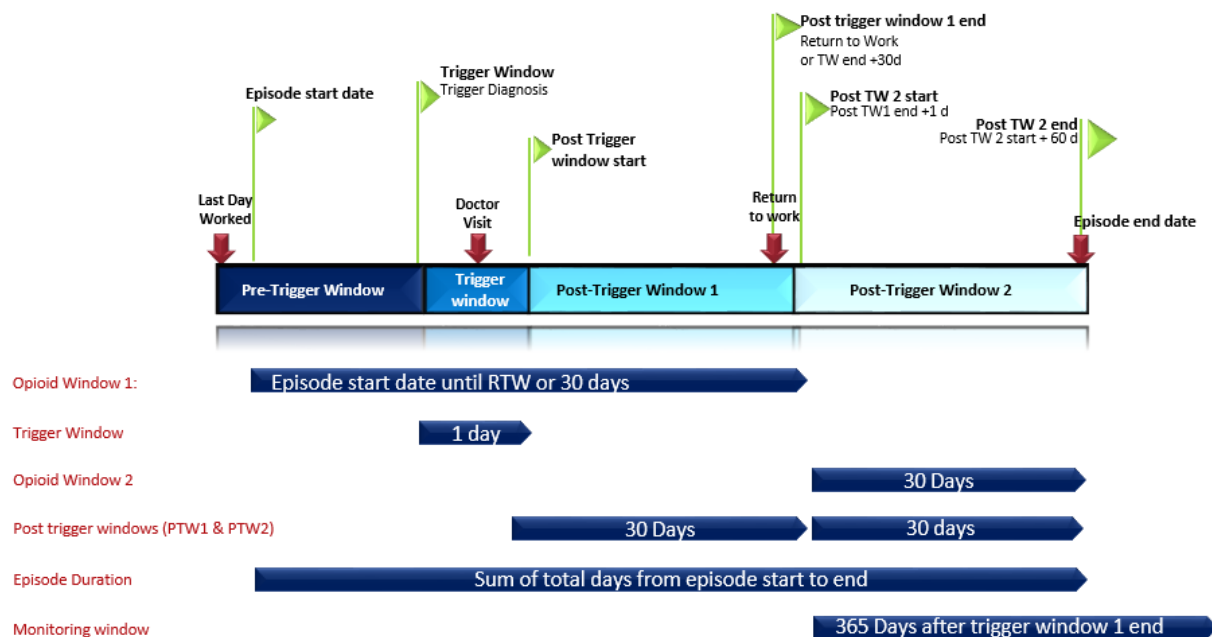
<sup>18</sup> Webster et al., "The Cascade of Medical Services and Associated Longitudinal Costs Due to Nonadherent Magnetic Resonance Imaging for Low Back Pain."

<sup>19</sup> Graves et al., "Early Imaging for Acute Low Back Pain."

pain. However, in patients who respond positively, the treatment may provide relief of symptoms without surgery or use of opioids.

**Exclusions:** Episodes were excluded from the analysis if business or clinical reasons existed that made it inappropriate to attribute the outcomes or costs to the medical management of the claim. Episodes were excluded for business reasons such as if the claim was denied, or if it was transferred from one MCO to another during the episode. Episodes clinical exclusion reasons included claims with fatalities, extended hospitalizations, occupational disease, or episode-specific medical exclusions.

### Episode timeline



Quality Metrics for episodes were as follows:

Low Back Pain
Follow-up visit within 90 days
Use of CT or MRI imaging
Opioids prescribed after trigger diagnosis
Absence of Opioids prescribed prior to trigger diagnosis
Opioids prescribed both before and after trigger diagnosis
Steroid injections

<b>Shoulder Injury</b>
Opioids prescribed after shoulder injury diagnosis
No opioids prescribed before shoulder injury diagnosis
Opioids prescribed both before and after shoulder injury diagnosis
Incremental imaging use (X-ray / ultrasound prior to CT/MRI)
MRI used in episode
Concurrent prescription of opioids and benzodiazepines
Repeat emergency department visit within 15 days of triggering diagnosis

<b>Knee Arthroscopy</b>
Opioids prescribed <b>after</b> knee arthroscopy procedure
Opioids <b>not</b> prescribed before knee arthroscopy procedure
Opioids prescribed <b>both</b> before and after knee arthroscopy procedure
Physical therapy
Multiple MRIs conducted in episode window
Concurrent prescription of opioids and benzodiazepines

## 6 RESULTS

This section will provide the detailed results of the analyses described in the study design. These results will then be used to provide the foundation and evidence for key recommendations in the following section.

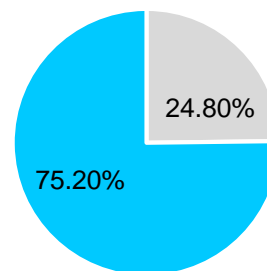
### 6.1 Qualitative Data Analysis: Satisfaction and Operational Ability

Qualitative data collection efforts for this study included surveys and interviews as described in the Study Design section. This section will describe the results and analysis of collected qualitative data as they provide insight into the satisfaction of workers and employers, as well as the HPP operational ability—or ability to execute activities in a way effective of HPP goals and objectives—of MCOs.

#### 6.1.1 Injured Worker Satisfaction

The injured worker's level of satisfaction while working with the MCOs during the claim process was used as a metric to assess the additional value MCOs are bringing to the workers' compensation system. Measuring the satisfaction of injured workers with their experience with the managed care environment is important because they are a key BWC stakeholder group. The objectives of the HPP prescribe the need to provide high quality medical care and RTW services for injured workers. Therefore, measuring their satisfaction allows us to measure the success of the managed care environment as prescribed by the HPP. This section will provide visualizations of the raw survey data, along with our interpretations and contextualization of the data.

Did you work with an organization, other than the Bureau of Workers' Compensation, to process the claims for your most recent work related injury?



■ Yes ■ No

652 injured workers participated in the survey. The survey asked questions about workers' level of satisfaction with the service they received. The first question on the survey asked if the respondent worked with an organization other than the BWC to process their medical claims. Three-quarters of respondents reported that they did not. Given that these respondents were chosen from a population of injured workers insured through the state and not through self-insured employers, this suggests that these respondents were not able to distinguish between the BWC and their MCO over the course of their claim. However, even if an injured worker does not know that they are interacting with an MCO, we can still infer their responses as

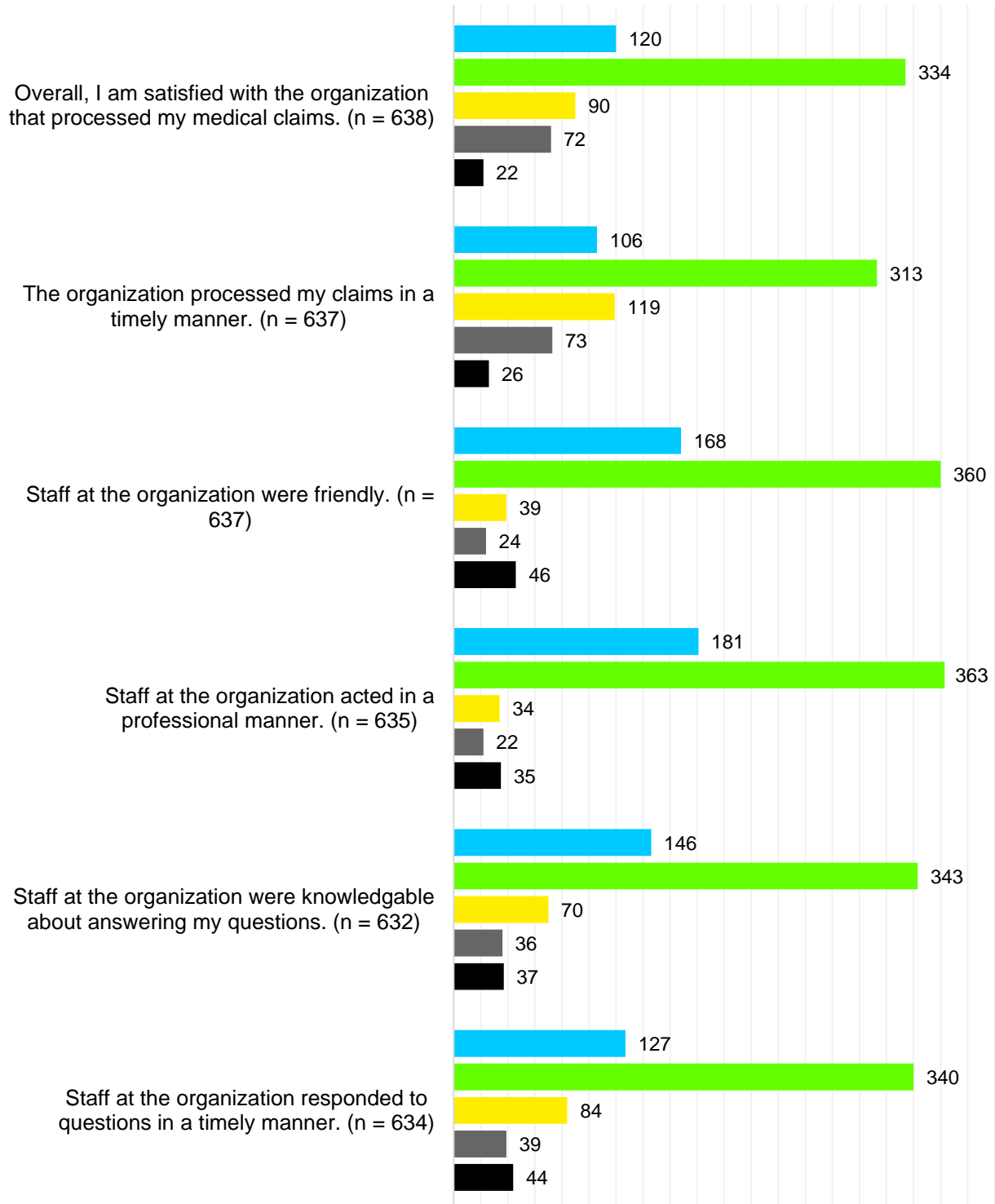
satisfaction with MCO service. This is because they are all employees of state-insured employers and we know that they are working with an MCO when they are contacted about medical care and medical claim issues and questions. Additionally, all survey participants were verbally instructed before responding to questions that they are answering questions specifically about the organization that was managing the medical services portion of their claim.

Respondents were asked to respond to seven statements about their experience with the organization that medically managed their claim with “strongly disagree,” “disagree,” “agree,” or “strongly agree.” They were also given a neutral option named “no answer.” The neutral option is important for ensuring data reliability by allowing those individuals who do not have the factual or experiential background required to have an opinion to respond to a statement. These survey items were designed to measure injured workers’ satisfaction with the managed care environment. The chart and table on the following pages shows the results of these survey items.



## Injured Worker Satisfaction

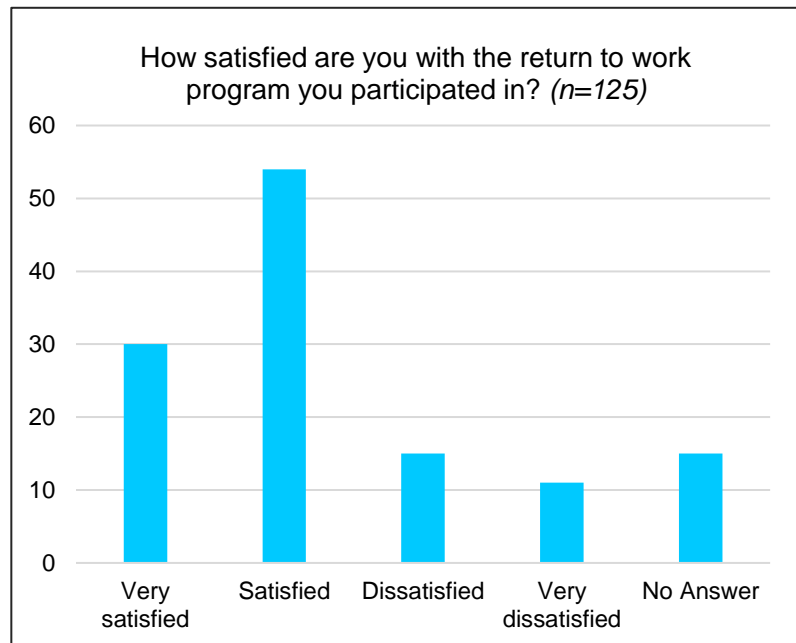
■ Strongly Agree   
 ■ Agree   
 ■ Disagree   
 ■ Strongly Disagree   
 ■ No Answer



Statement	Strongly Agree	Agree	Disagree	Strongly Disagree	No Answer
Overall, I am satisfied with the organization that processed my medical claims.	18.81%	52.35%	14.11%	11.29%	3.45%
The organization processed my claims in a timely manner.	16.64%	49.14%	18.68%	11.46%	4.08%
Staff at the organization were friendly.	26.37%	56.51%	6.12%	3.77%	7.22%
Staff at the organization acted in a professional manner.	28.50%	57.17%	5.35%	3.46%	5.51%
Staff at the organization were knowledgeable about answering my questions.	23.10%	54.27%	11.08%	5.70%	5.85%
Staff at the organization responded to questions in a timely manner.	20.03%	53.63%	13.25%	6.15%	6.94%

Overall, about 75% injured workers responded with positive satisfaction to these survey items. We can conclude that, generally, injured workers are satisfied with the service they receive from MCOs.

To gain greater insight into injured workers' satisfaction with MCOs, additional questions were asked with specific phases of the MCO-managed treatment process, including return to work training/vocational rehabilitation and the experience of seeking medical treatment. 125 survey respondents reported having participated in a vocational rehabilitation program. The injured workers were asked about their level of satisfaction with the program as a closed-ended question and their suggestions for improvements as an open-ended question.



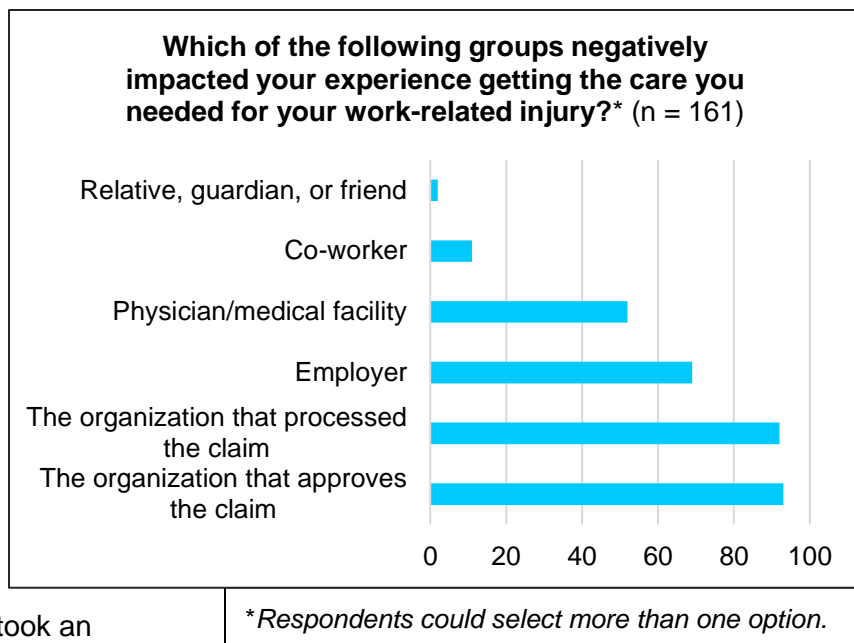
67.2% of respondents to the question reported being very satisfied or satisfied with their return to work training program, while 20.8% reported being dissatisfied or very dissatisfied. 12% gave no answer. Respondents to this question were also asked an open-ended question: “What recommendations do you have for improving the return to work program that you participated in?” 49.2% reported that they believe no improvement was needed to the program. Among those that had recommendations, the most commonly expressed topics included a desire for more time allowed in the program (7.63% of total survey respondents), quicker approval for paying for the program (2.54% of total respondents), and a need for better communication among providers, the BWC, and MCOs about the workers’ needs (8.47% of total respondents).

Survey participants were also asked about their experience seeking medical treatment. They were asked if they had any trouble getting medical treatment, what (if any) individuals or organizations negatively impacted their experience getting medical care, and details about their experience.

Of 618 respondents, 174 (28.16%) reported having trouble getting medical treatment for their injury. These individuals were asked to identify from six options which one or more groups negatively impacted their ability to seek medical care. Of the 161 injured workers who responded to this question, more than half reported that their MCO negatively impacted their experience getting the care they needed, representing 15.04% of total survey respondents.



The individuals who responded that they had trouble getting medical treatment were asked an open-ended question to describe their experience. A total of 172 individuals responded to this question. 26.16% of those who answered this question explained that having an additional allowance claim denied was their greatest obstacle to obtaining care (7.28% of all survey respondents). 23.84% reported that they believed it took an unreasonable amount of time to receive care and to have their claims approved (4.53% of all survey respondents). 12.79% said that a lack of adequate communication among those who were responsible for providing care and approving their claims contributed to their negative experience (3.56% of all survey respondents).



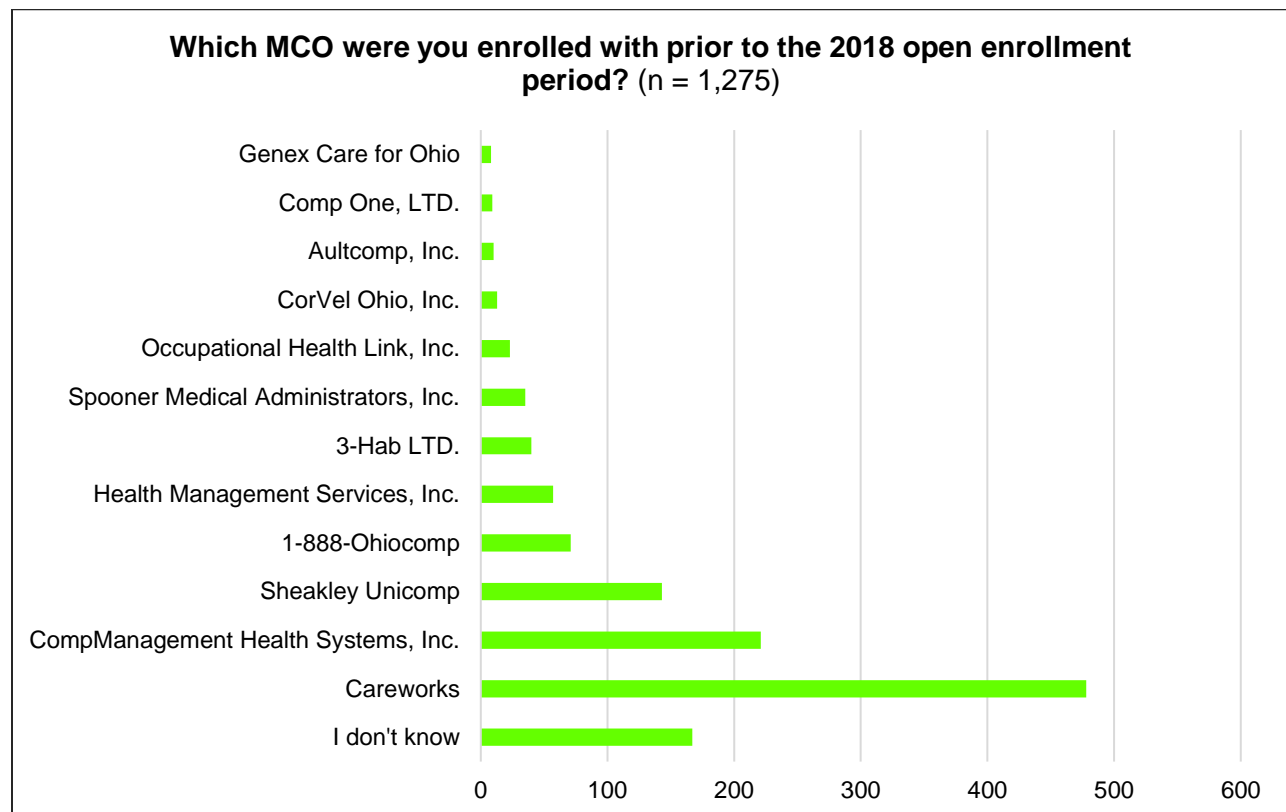
Our survey concluded that, overall, injured workers are satisfied with the way MCOs manage their experience with the workers' compensation system. They are generally satisfied with the timeliness, professionalism, and knowledge of the MCO staff with whom they interact. Injured workers generally experienced few obstacles for obtaining care and of those who participated in a return to work training program, they reported high satisfaction with those programs. Among the key reasons for dissatisfaction, injured workers report lack of communication, additional allowance denial, and lack of timeliness. However, dissatisfied workers represent the minority of overall respondents.

## 6.1.2 Employer Satisfaction

Because employers are key stakeholders of the workers' compensation system, we measured their satisfaction with the managed care environment. The goals of the HPP depend on employer buy-in to the system. For this reason, understanding employer satisfaction and concerns is important for meeting HPP goals.

We asked Ohio's state-insured employers to complete an online survey through email with contact information supplied by the BWC. For this report, we are analyzing the data only supplied by employers who reported having some interaction with their MCO. 32% of 1,896 total respondents said they never have any interaction with an MCO, leaving data from 68% of respondents who reported interacting with their MCO rarely, sometimes, or frequently to be included in the analysis. Because we sent email invitations to all employers listed with email contact information with the Ohio BWC, it is reasonable to assume that some of those invitations were sent to employers who do not interact with MCOs as part of their job duties.

All current MCOs were represented by employers in this survey. The following graph shows this distribution.



To determine if this distribution of MCO representation is adequate for extrapolating the results, we need to see if they are represented at the same rate in the survey as they are state wide. We compared the survey representation percentages with market shares as found in the 2018 MCO report card.

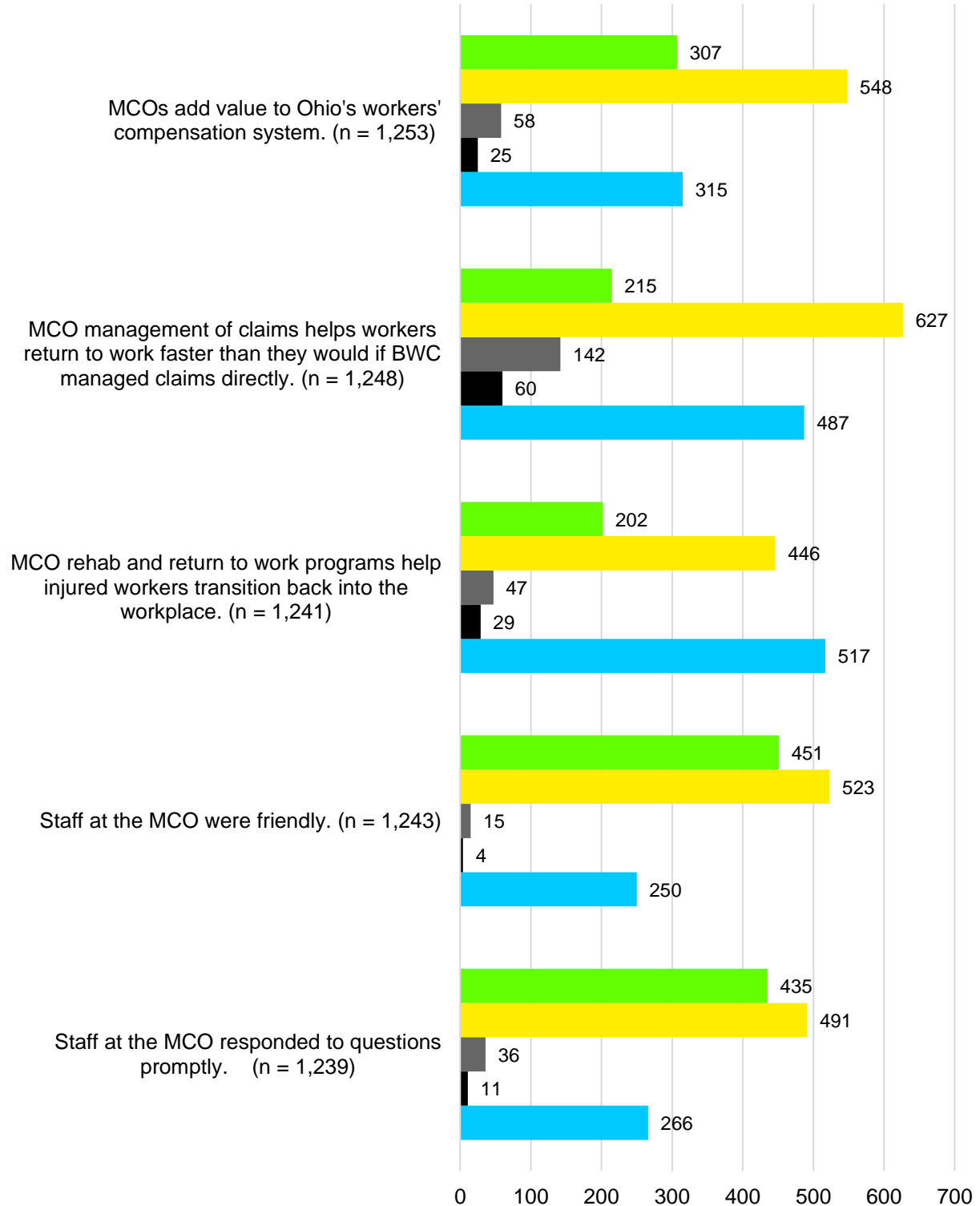
MCO	Representation		
	Survey	Market	Difference
Careworks	43.14%	42.62%	-0.52%
CompManagement Health Systems, Inc.	19.95%	13.26%	-6.69%
Sheakley Unicom	12.91%	11.54%	-1.37%
1-888-Ohiocomp	6.41%	10.22%	3.81%
Health Management Services, Inc.	5.14%	8.53%	3.39%
3-Hab LTD.	3.61%	3.31%	-0.30%
Spooner Medical Administrators, Inc.	3.16%	2.66%	-0.50%
Occupational Health Link, Inc.	2.08%	1.86%	-0.22%
CorVel Ohio, Inc.	1.17%	2.05%	0.88%
Aultcomp, Inc.	0.90%	1.87%	0.97%
Comp One, LTD.	0.81%	0.86%	0.05%
Genex Care for Ohio	0.72%	1.23%	0.51%

Each MCO is generally represented in the survey in a similar proportion as they are represented by actual market share. We can conclude with confidence that all MCOs are appropriately represented in this survey.

Similar to injured workers, employers were asked to respond to nine statements about their experience with their MCO. These survey items were designed to measure employers' satisfaction with MCOs. The charts and table on the following pages shows the results of these survey items.

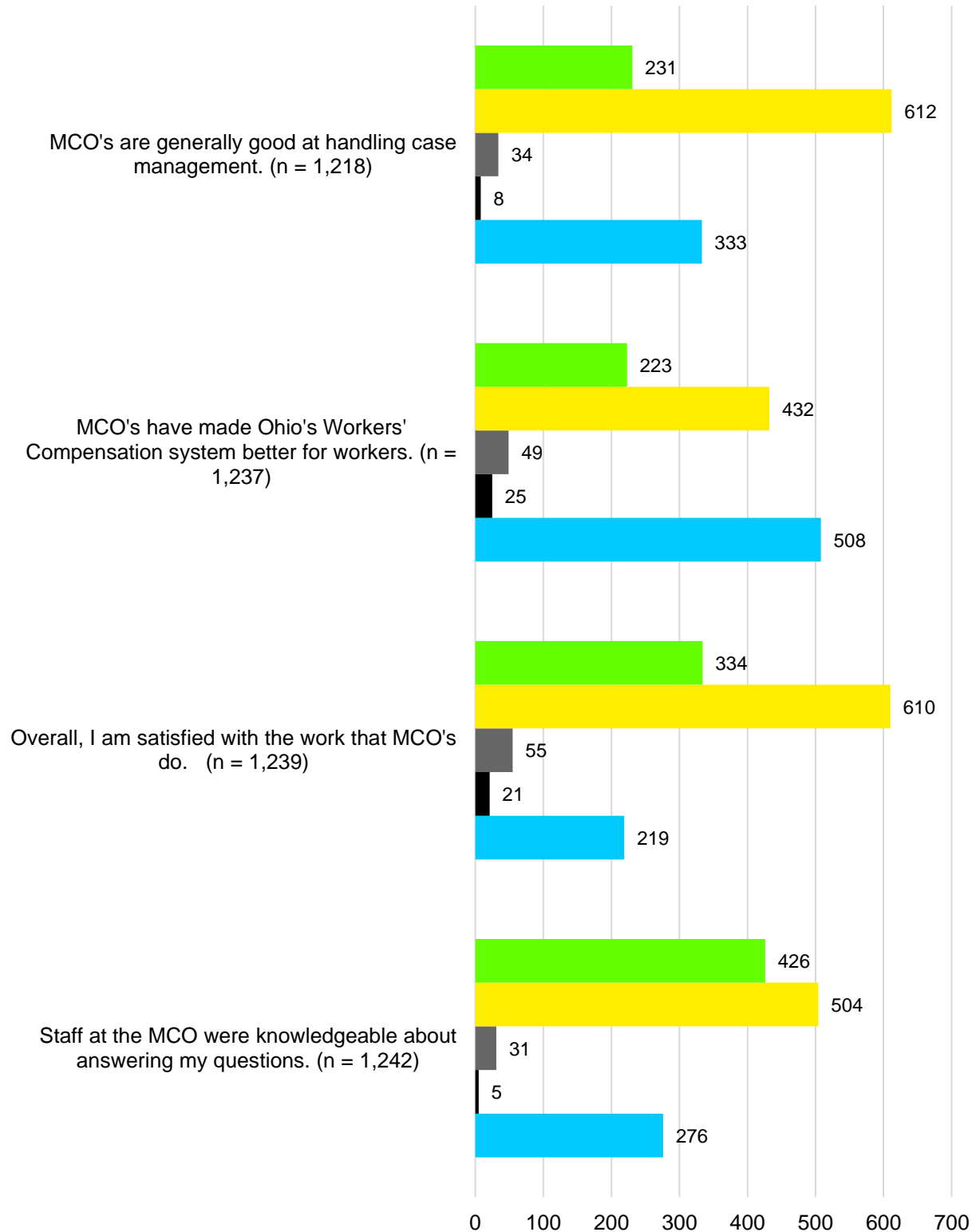
## Employer Satisfaction

■ Strongly Agree 
 ■ Agree 
 ■ Disagree 
 ■ Strongly Disagree 
 ■ No Answer



## Employer Satisfaction (Cont.)

■ Strongly Agree 
 ■ Agree 
 ■ Disagree 
 ■ Strongly Disagree 
 ■ No Answer





Statement	Strongly Agree	Agree	Disagree	Strongly Disagree	No Answer
MCOs add value to Ohio's workers' compensation system.	24.5%	43.7%	4.6%	2.0%	25.1%
MCO management of claims helps workers return to work faster than they would if the BWC managed claims directly.	20.2%	32.4%	5.8%	2.5%	39.0%
MCO rehab and return to work programs help injured workers transition back into the workplace.	16.3%	35.9%	3.8%	2.3%	41.7%
Staff at the MCO were friendly.	36.3%	42.1%	1.2%	0.3%	20.1%
Staff at the MCO responded to questions promptly.	35.1%	39.6%	2.9%	0.9%	21.5%
MCOs are generally good at handling case management.	19.0%	50.3%	2.8%	0.7%	27.3%
MCOs have made Ohio's workers' compensation system better for workers.	18.0%	35.0%	4.0%	2.0%	41.0%
Overall, I am satisfied with the work MCOs do.	27.0%	49.2%	4.4%	1.7%	17.7%
Staff at the MCO were knowledgeable about answering my questions.	34.3%	40.6%	2.5%	0.4%	22.2%

As shown from these data, the majority of employers are satisfied with the work conducted by the MCOs. This is a significant increase from the injured worker satisfaction ratio, where 75% were satisfied. This shows a very high level of satisfaction with MCOs among employers. While significant percentages of respondents reported no answer on these questions, we can assume that they did not have enough relevant experience with their MCO to provide an appropriate answer. Additionally, even if we remove the "no answer" cohort from each question response group, the individual question still has a high enough sample size to maintain a 95% confidence level and at most a 3% margin of error.

Among those respondents who are currently unsatisfied with MCOs, we identified the following themes in unstructured text responses:

- *Communication*: opportunity for improved communication with MCO regarding claim status and return to work plan.
- *Monopolistic system*: some employers reported that they believe the privatized systems of other states would be preferable to the current monopolistic system.
- *Bureaucracy*: perceived opportunity to streamline the paperwork required during the claims process.
- *Duplication of work*: opportunity to educate employers on roles of responsibility of the MCOs and BWC. Some employers reported not understanding the function of MCOs, a belief that they are unnecessary, and the opinion that greater efficiency could be achieved if all work was done by the BWC. These respondents cited experiences where they were asked the same questions by both the BWC and their MCO.
- *Disagreement with doctors*: opportunity to better explain the denial actions by the MCOs. Some respondents reported being confused as to why an MCO would deny something a doctor recommended to an injured worker.

Generally, we found that employers who are unsatisfied with MCOs have many of the same concerns as unsatisfied injured workers. From the survey responses, both groups highlight opportunities for improvement in communication, claim denial status and justification, and system navigation. Again, however, dissatisfied respondents represent a relatively small portion of total survey participants.

### 6.1.3 Operational Ability

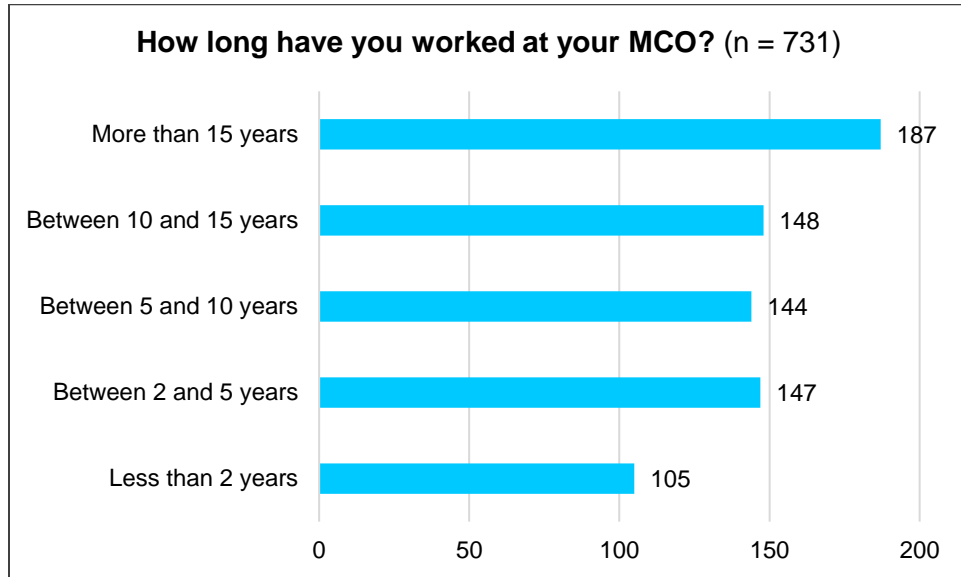
Operational ability is the ability of MCOs to perform the functions and activities as intended by the HPP to meet the goals prescribed to the managed care environment. This variable was measured through surveys of BWC operational staff and MCO operational staff. This section will provide the results and analysis of MCOs' operational ability.

#### MCO Responses

We measured the distribution of survey respondents to ensure that the survey results are a good representation of the MCO environment. A total of 738 MCO operational staff members responded to the survey and all MCOs were represented in the survey. In a comparison of rate of survey participation to MCO proportion of total invitation to participate, we found that we received a representative sample from each MCO. The following table shows this comparison:

MCO	Representation		
	Participated	Invited	Difference
Careworks	29.81%	31.72%	-1.91%
CompManagement Health Systems, Inc.	18.56%	18.52%	0.04%
Sheakley Unicom	13.82%	11.82%	2.00%
1-888-Ohiocomp	15.31%	12.61%	2.70%
Health Management Services, Inc.	8.94%	8.57%	0.37%
3-Hab LTD.	4.74%	3.65%	1.10%
Spooner Medical Administrators, Inc.	3.12%	3.25%	-0.13%
Occupational Health Link, Inc.	0.41%	1.28%	-0.87%
CorVel Ohio, Inc.	0.54%	4.04%	-3.50%
Aultcomp, Inc.	2.17%	2.27%	-0.10%
Comp One, LTD.	1.22%	1.28%	-0.06%
Genex Care for Ohio	1.36%	0.99%	0.37%

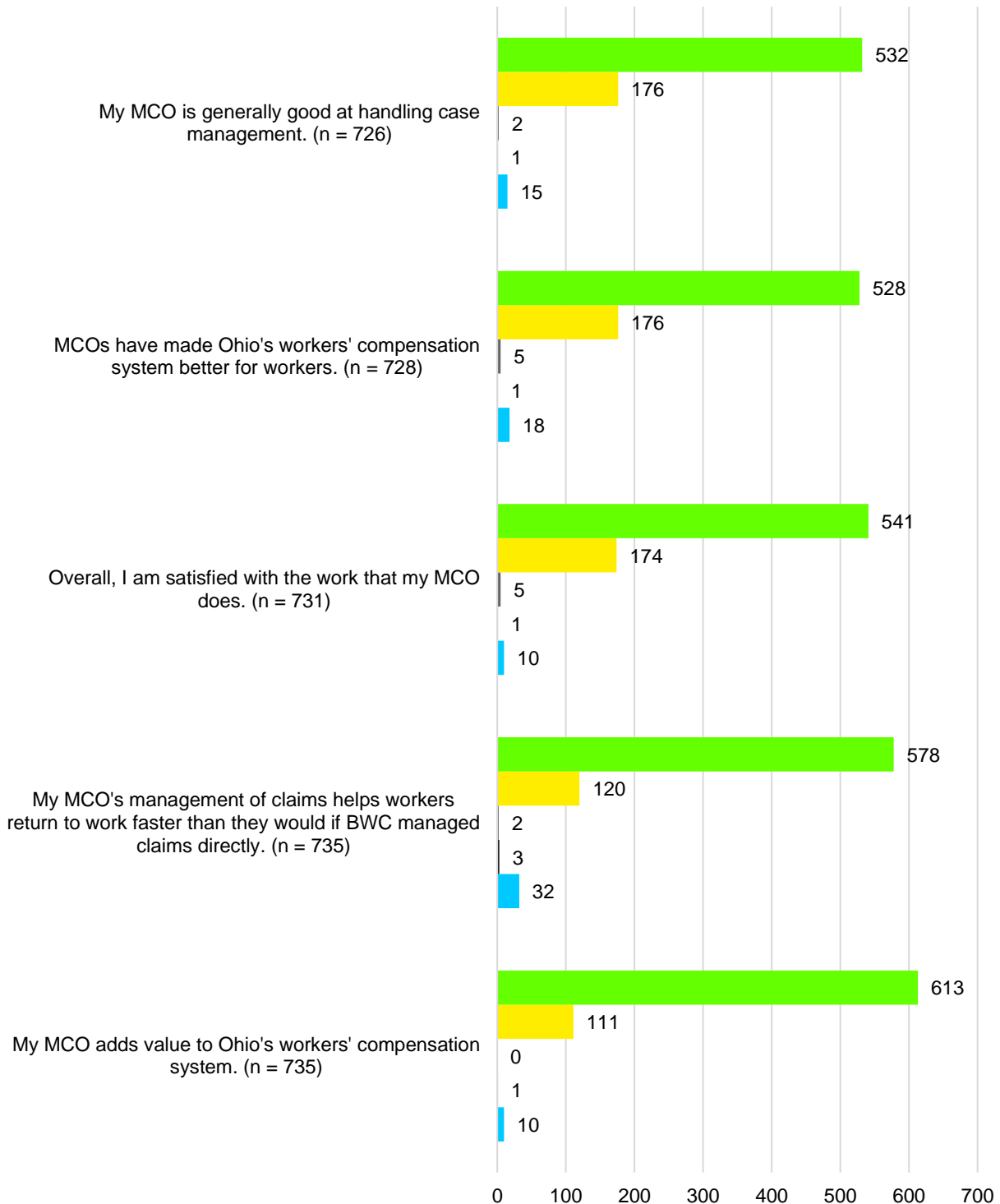
We also found adequate representation of tenure at an MCO. The following graph illustrates these findings.



We asked MCO staff to select how much they agree or disagree with five statements intended to measure MCO operational ability. Their responses are shown in the figure on the following page.

## MCO Perception of Operational Ability

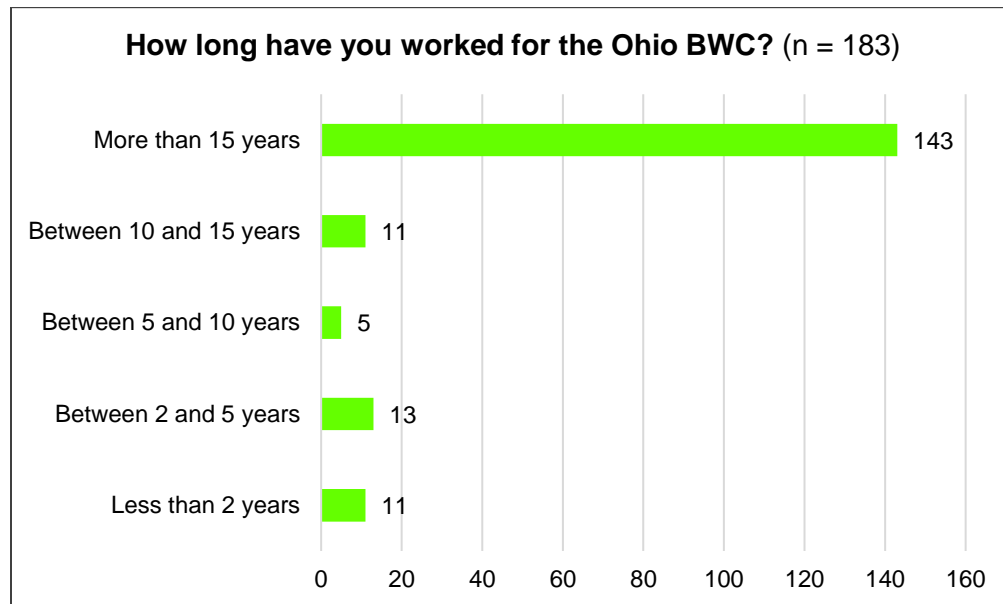
■ Strongly Agree 
 ■ Agree 
 ■ Disagree 
 ■ Strongly Disagree 
 ■ No Answer



These data indicate that MCOs generally believe that they have high operational ability. A comparison of these responses to BWC staff responses to the same questions will yield further opportunity for analysis. This comparison can be found in the following section.

## BWC Responses

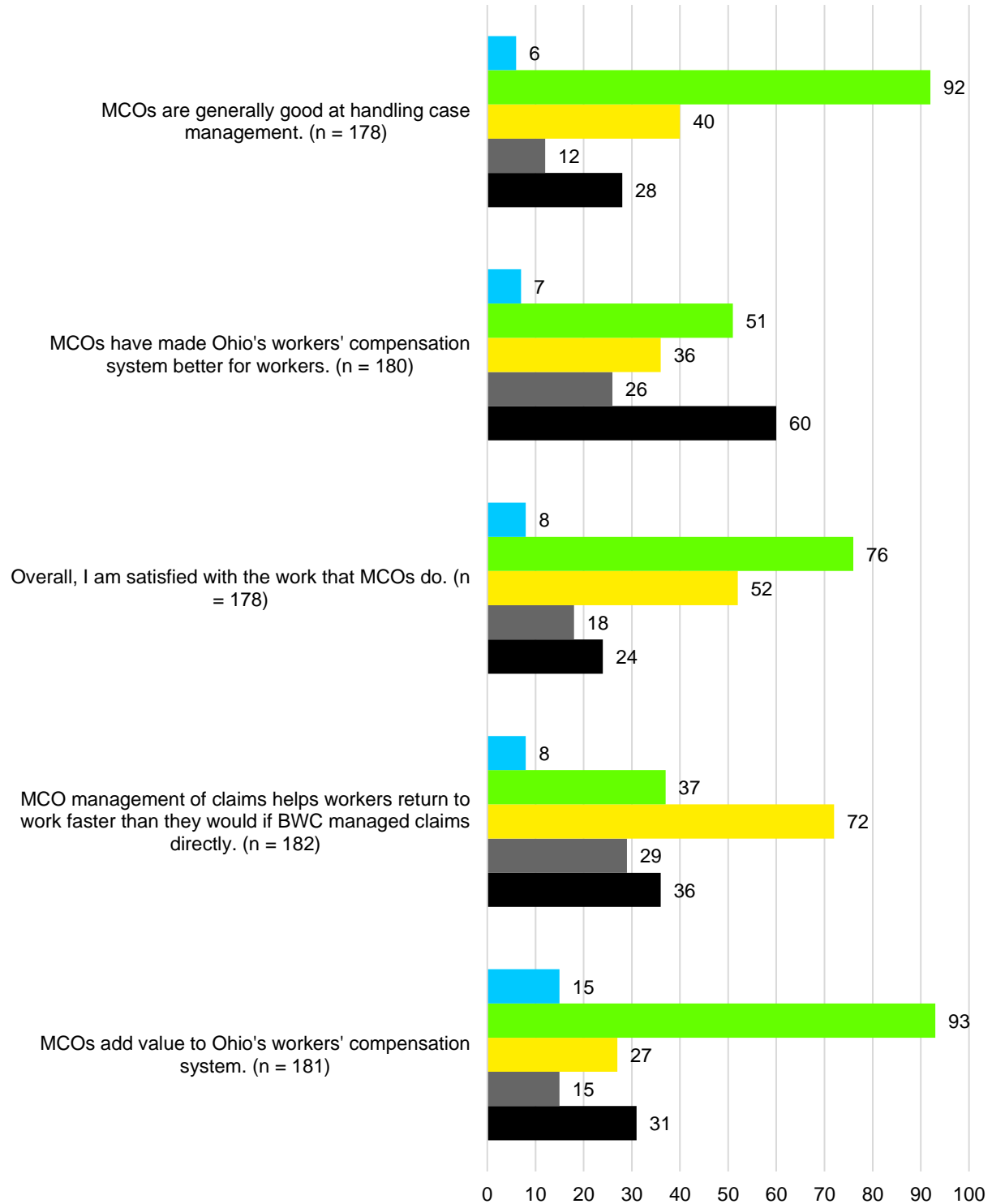
The BWC operational staff survey received responses from all regional offices in the state. The majority of the respondents have worked for the BWC for more than 15 years and shown in the following chart.



BWC staff responses to the same questions asked of MCO staff to measure operational ability are on the following page.

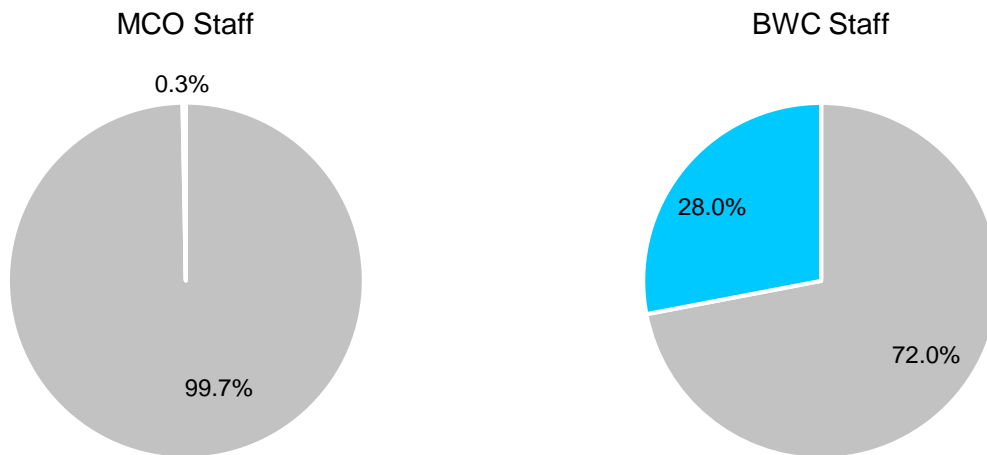
## BWC Perception of Operational Ability

Strongly Agree Agree Disagree Strongly Disagree No Answer

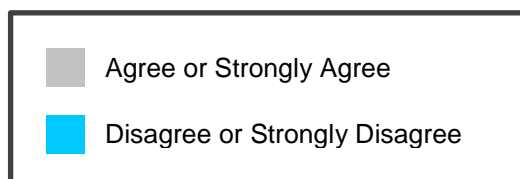
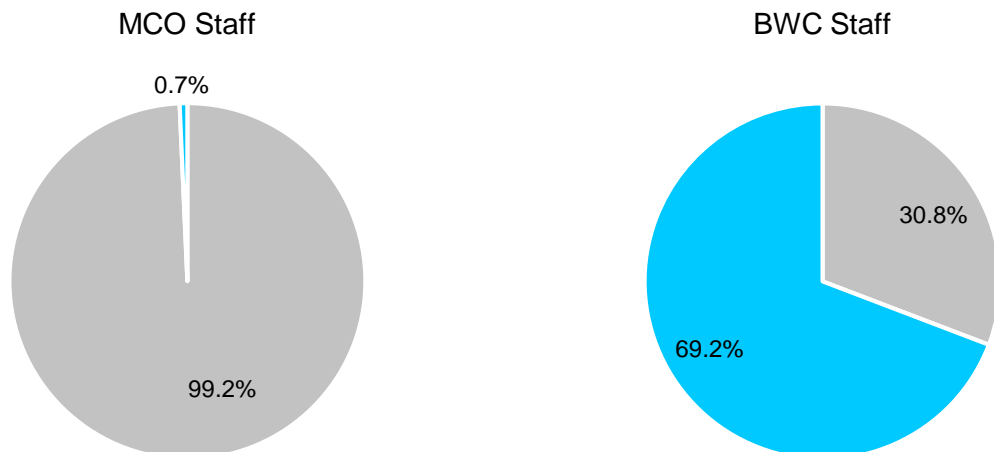


There is greater variation in responses among BWC operational staff than there is among MCO operational staff. Even so, BWC staff do report to agree that MCOs have adequate operational ability. The analysis of the survey results between MCO and BWC respondents for “MCO management of claims helps workers return to work faster than they would if BWC managed claims directly” may be attributable to the differences in tenure at their respective institutions, this suggests that experience in the field may influence these responses. We can more directly compare MCO responses to BWC responses in the following charts:

### MCOs add value to Ohio’s workers’ compensation system.

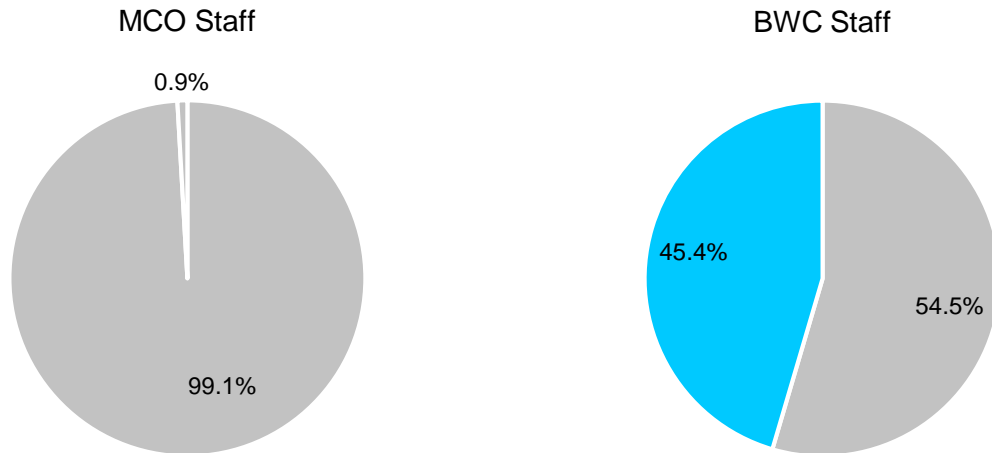


### MCO management of claims helps workers return to work faster than they would if BWC managed claims directly.

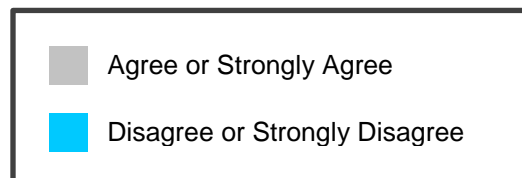
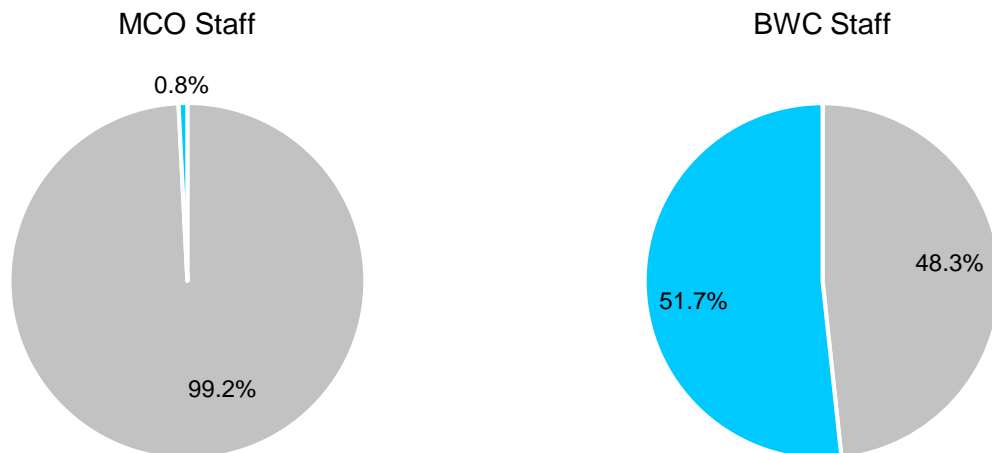




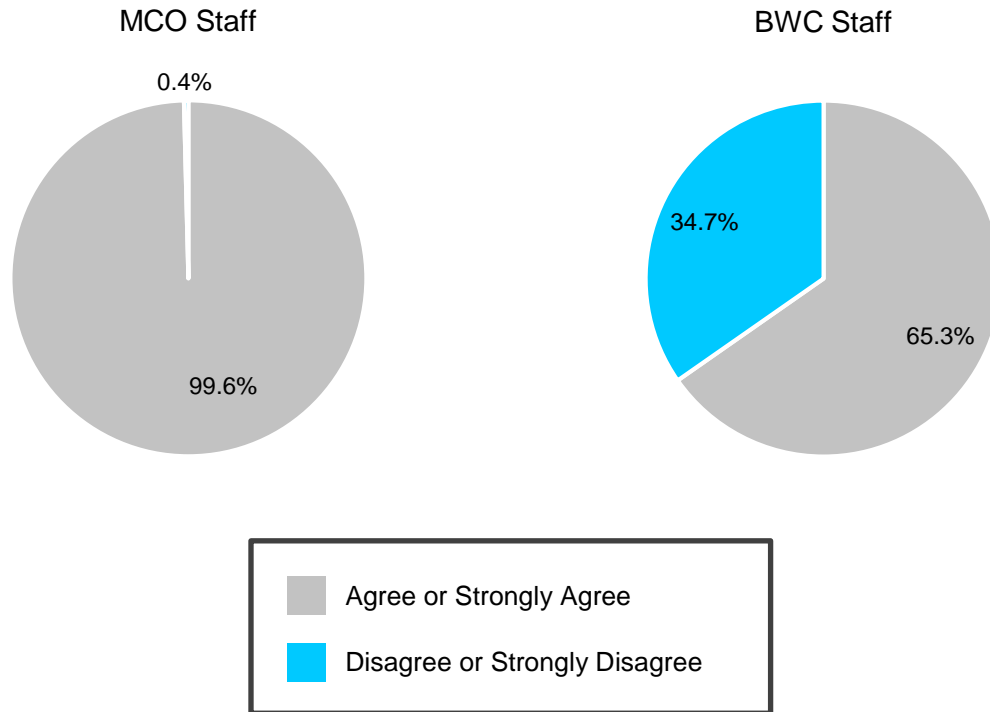
**Overall, I am satisfied with the work that MCOs do.**



**MCOs have made Ohio's workers' compensation system better for workers.**



### MCOs are generally good at handling case management.



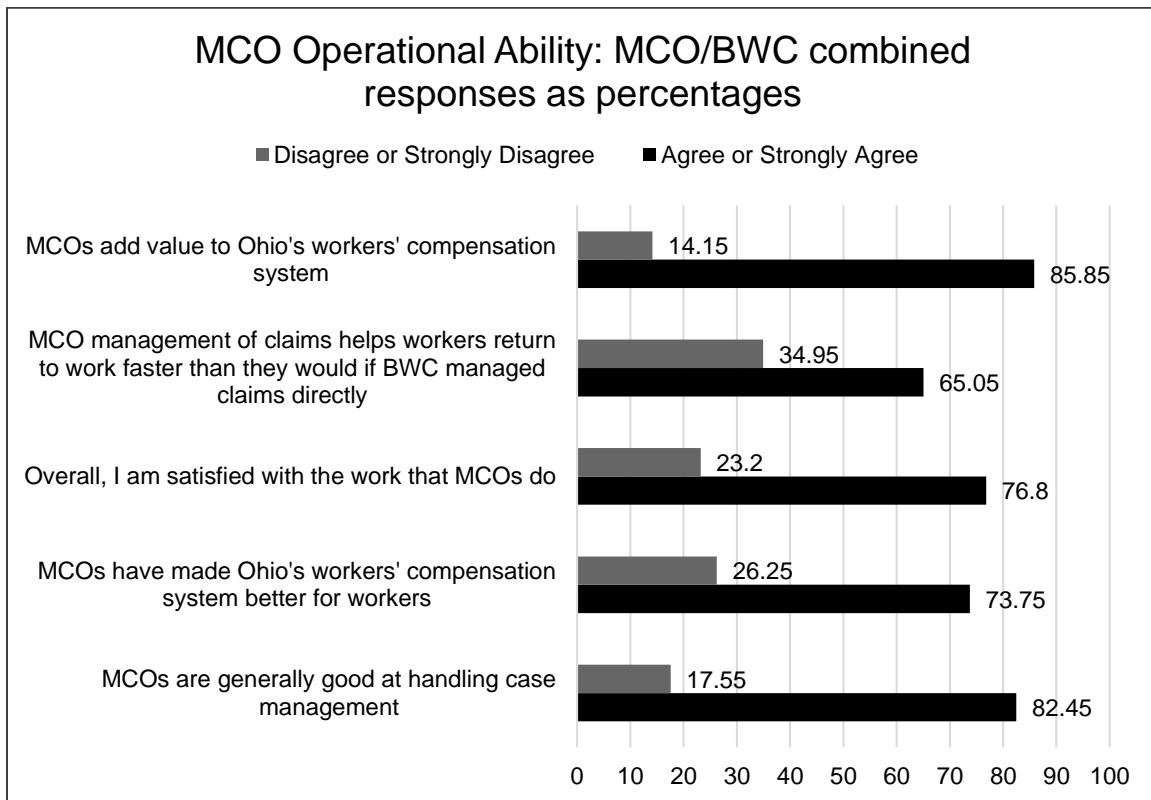
Based on this information, we can see that while BWC operational staff generally agree that MCOs have a positive impact, there is still a disparity between the assessment of the impact by BWC staff and that of MCO staff. The data suggests this may be due to levels of experience in the system. While MCO staff believe that they are providing high-quality medical management services, BWC staff are less likely to agree.

In open ended questions, asking BWC staff about their concerns with how MCOs are currently providing medical management services, the following themes were uncovered:

- *Job Performance:* Respondents reported that while many claims staff members at MCOs perform their job well, there are some that could use improvement. BWC claims service specialists state that they often have to perform the same medical management tasks as the MCO. BWC staff members report that this could be due to inexperience, lack of medical or claim process knowledge, or being overworked.
- *Profit Motivation:* MCOs are private companies and their sustained operation depends on adequate financial development. Because of the measures by which they are compensated, BWC staff members reported that MCOs give quality case management services to claims that help meet those measures at the expense of those that do not, such as older claims and partial total disability claims.

- *Communication:* Many BWC staff members reported there is an opportunity for improvement in effective communication with MCO staff, especially as it relates to managing claim notes and documentation.
- *Overlapping Work:* Some BWC staff members suggest MCO staff more consistently refer legal questions and questions about compensations to the appropriate BWC staff. Respondents claim that MCO staff members answer questions about legal and compensation issues, sometimes giving incorrect information, rather than referring those questions to the BWC.

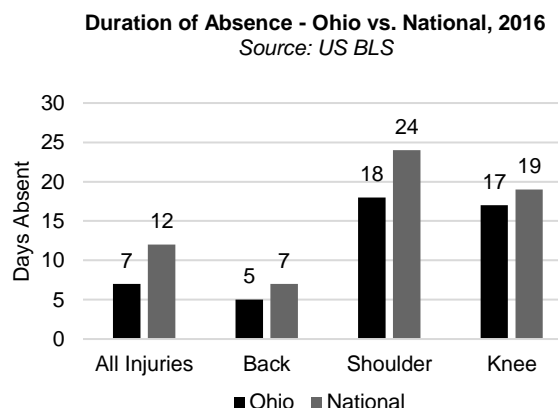
In order to obtain a more accurate picture of MCO operational ability, given the inherent biases present in qualitative survey responses, we can combine MCO and BWC staff survey responses and weigh them equally. This allows us to see an aggregate picture combining two different perspectives. The following graph shows this analysis.



## 6.2 Quantitative Data Analysis: Costs, Savings, and RTW

The goal of the quantitative analysis was to examine the impacts that MCOs have had on the costs, clinical care quality, and return to work outcomes of Ohio's WC claims. This analysis examined MCO performance in terms of these variables using a defined set of medical conditions or episodes. Episodes of care enable us to group like claims together on the basis of those claims having diagnosed medical conditions known to have a similar course of care and patient journey. Episodic analysis provides the groundwork to make equitable performance comparisons over time and/or among specific populations by selecting for a controlled population of claims. In this manner, questions of performance are shifted from "How well did MCOs care for their patients in general?"—a problematic question when each MCO cares for an enormously diverse set of medical conditions—to "Among all patients with back conditions, where was improvement observed and how? Who performed the best on this episode and how?"

The U.S. Bureau of Labor Statistics (BLS) reported duration of absence over time, Ohio				
	All Injuries	Back	Shoulder	Knee
2012	7	6	21	74
2013	7	5	12	10
2014	7	5	7	25
2015	9	5	12	32
2016	7	5	18	17

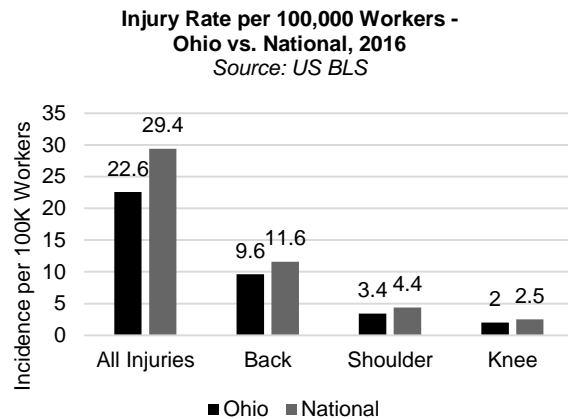


The medical conditions selected for this study were low back pain (LBP), shoulder injury (Shoulder) and knee arthroscopy (KA). These episodes were selected because they account for a high proportion of the direct and indirect costs of workplace injuries in Ohio. These conditions were chosen as a vehicle to evaluate MCO impacts on care costs due to their potential to incur significant treatment costs and result in extended or repeated absences from work. Collectively, these conditions (LBP, KA and Shoulder) were determined to account for 20% of the BWC's medical expenditures and 50% of the lost working days.

National Comparison data indicates that Ohio is already performing above the national average in many metrics of importance to the workers' compensation system. The BLS compiles data on injury cost, incidence, and disability duration according to the bodily location of injury. Recent data published by the BLS (shown in table and figure above) demonstrates the median duration of absence for Ohio's injured workers to be significantly better than the national average. Specifically, Ohio's injured workers return to the workforce five days earlier on average than workers in other states. In terms of the specific conditions examined, BLS reports that Ohio workers with shoulder injuries return an average of six days earlier than the national average, and workers with back or knee injuries return two days earlier than the national average.

As compared to national level data, Ohio's injured workers experience not only an expedited return to work after injury on the job, but a reduced likelihood of suffering these injuries in the first place. In fact, BLS data from 2016 show that the incidence per 100,000 insured workers is seven points better than the national average for all injury types and is one to two points better than the national average for the specific conditions studied here. While such data cannot be attributed to any one player in the

Ohio workers' compensation system, it does indicate that the collective action of parties involved is resulting in high standards that are beneficial to both employers and workers.



## 6.2.1 Factors Influencing Total Costs of Claims

Workers' compensation medical costs-per-injury have been increasing relative to what would be expected based on medical inflation alone. Over the 1996–1997 to 2001–2002 period, the growth rate of average workers' compensation medical severity was greater than that observed in per capita healthcare spending and more than three times the 21% rate of inflation in the medical care component of the Consumer Price Index.<sup>20</sup> The observed increases in workers' compensation claims costs between 1996 and 2002 were largely attributed to overall changes in medical patterns including the following:

BLS reported injury rate per 100,000 over time, Ohio				
	All Injuries	Back	Shoulder	Knee
2012	29.2	13.0	3.5	0.1
2013	23.1	9.0	2.7	2.2
2014	26.3	10.6	4.6	3.3
2015	23.0	7.6	4.4	2.1
2016	22.6	9.6	3.4	2.0

1. More severe injuries/expensive diagnoses (20%).
2. Markedly higher numbers of treatments per claim (50%).
3. Medical care price inflation and shifts to more expensive treatments for a given diagnosis (30%).

The spending patterns encountered in workers' compensation differ from, in some respects, those in many other payer environments. For example, Medicare is less impacted by a changing severity of injuries over time than is workers' compensation, where changes in

<sup>20</sup> Restrepo, "Measuring the Factors Driving Medical Severity: Price, Utilization, Mix"

industry can dramatically impact the types of claims in a state. Increases in Medicare costs over the same period of time have been attributed to increased use of specialty services, physician visits, specialist consultations, and hospitalizations, particularly for those with chronic illnesses or in their last six months of life.<sup>21</sup>

More recently, the trends in workers' compensation claims have changed, showing national decreases in the costs per claim for the first time in over 20 years. Nationally, 2014-2015 workers' compensation claims have had a 3% decrease in both costs per claim for physician services and a 3% decrease in physician utilization (including number and type of visits and services rendered per claim). Although a 5% increase in cost was observed in total WC claim costs in 2016, it was not enough to negate the overall improvement in total costs.<sup>22</sup> This was followed in 2015-2016 by a 9.8% reduction in workers' compensation pharmacy costs, which was a pattern observed in other payer environments outside of workers' compensation and resulted in a 2.1% decline in total spend on medicines nationwide.<sup>23</sup>

A significant portion of the costs of a claim are related to indemnity payments, which include compensation payments related to lost wages, short or long-term disability, permanent disability, lump sum settlements, survivor benefits, etc. The total amount of indemnity paid is impacted, in part, by the duration of disability. This is because many forms of compensation, such as payments for living maintenance (LM) and temporary total (TT) disability (collectively termed disability type TT/LM), are provided to replace salary lost by the injured worker while they are recovering. Thus, one important way MCO medical management can reduce the overall cost of a claim is through the provision of care in a manner that facilitates earlier return to work. By helping expedite an injured worker's recovery, MCOs can benefit both the injured worker and the employer by enabling an efficient return to productivity and reducing the number of days for which wage replacement is paid. Relative to other states in the US, Ohio is directly in line with average wage replacement payment levels, as the most common index among U.S. states is two-thirds (66.7%) gross wage replacement.<sup>24</sup>

Total cost of a workers' compensation claim is attributable primarily to the combination of medical and compensation-related (indemnity) costs. NCCI states that in 2017, approximately 60% of workers' compensation costs were attributed to medical expenses nationwide. In Ohio, this number is approximately 37%, a reduction from 42.5% in 2010, demonstrating that Ohio's proportion of claims costs that comes from medical care is lower than the national average.

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<sup>21</sup> Bernstein, Moss, and Tiggle, "Health Care in America: Trends in Utilization."

<sup>22</sup> "Medical Costs Trends: Then and Now."

<sup>23</sup> Paduda, "Prescription Drug Management in Workers' Compensation, 15th Ed."

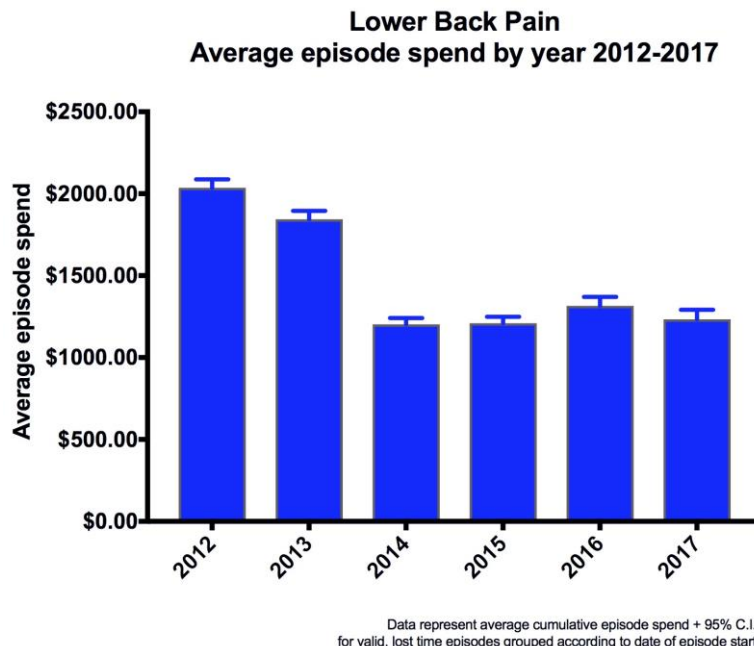
<sup>24</sup> Reede, "Adequacy of Workers' Compensation."

Year	Medical benefits paid as proportion total benefits paid	Compensation paid as proportion total benefits paid	Total benefits paid
2017	36.92%	63.08%	\$1,491,334,199.00
2016	36.23%	63.77%	\$1,601,896,786.00
2015	37.36%	62.71%	\$1,647,431,080.00
2014	38.43%	61.57%	\$1,723,658,964.00
2013	39.61%	60.39%	\$1,781,831,400.00
2012	40.98%	59.02%	\$1,827,550,255.00
2011	42.50%	57.50%	\$1,832,624,010.00
2010	42.45%	57.55%	\$1,886,386,292.00

Limited data from neighboring states was identified for use as a comparison in this study, due to the specificity of the analysis conducted. However, in 2018, data published by the state of Tennessee documented a 6% decrease in the average total cost per workers' compensation claim. They attributed most of this decrease to a 24% reduction in permanent partial disability (PPD) benefits but stated that statewide workers' compensations reforms, reduced litigation and less frequent catastrophic injuries had likely impacted costs as well.<sup>25</sup>

## 6.2.2 Low Back Pain

**Population:** DXC examined a total of 88,212 low back pain episodes for this study. Of these, 24,064 episodes were excluded for medical or business reasons leaving a total of 64,148 valid low back pain episodes. In order to restrict our analysis to claims for which the MCOs would have a significant interaction with the injured worker and likely have an opportunity to impact the course of care, our analyses focused on claims of type "lost time" (in which the injured worker experiences an extended absence over seven days). Lost time claims were selected and medical only were



<sup>25</sup> O'Connor, "19% Workers' Comp Rate Decrease Proposed for Tennessee."

excluded from the analysis (unless otherwise indicated). The data presented here represents 12,328 valid lost time low back pain episodes occurring between 2012 and 2017. The proportion of episodes that represented lost time claims declined over the study period from 41% in 2012 to 33% in 2017. Approximately 27% of episodes were excluded from our analysis, leaving an average of 2,055 valid lost time low back pain episodes per year.

*Low Back Pain claim population included in study*

Low Back Pain	2012	2013	2014	2015	2016	2017	Average
Total episodes identified	18380	17476	17208	15625	11204	8319	14702
<b>Total valid included episodes</b>	<b>2708</b>	<b>2559</b>	<b>2390</b>	<b>2170</b>	<b>1476</b>	<b>1025</b>	<b>2055</b>
Total invalid excluded episodes	4856	4592	4735	4330	3282	2269	4011
Percent of episodes excluded	26%	26%	28%	28%	29%	27%	27%
Percent of episodes medical only	59%	59%	61%	61%	60%	67%	61%
Percent of episodes lost time	41%	41%	39%	39%	40%	33%	39%

*\*2017 data incomplete at time of report preparation*

**Episode spend:** The total medical spend for low back injury decreased during the study time window from \$2,037.00 to \$1,233.00 on average per episode. This represents an average cost reduction of \$803.05 per episode (39% reduction 2012-2017) per episode. The number of valid low back pain episodes reduced by 62% during the same period from an average of 2,708 to 1,025 valid lost-time episodes annually.

Low back pain (LBP) remains an important public health problem, as it is the leading cause of years lived with disability in developed countries.<sup>26</sup> Occupational LBP represents a substantial economic and social burden. In the United States, the direct costs associated with work-related overexertion events (dominated by LBP) in 2011 were estimated to be \$14.2 billion. In fact, LBP accounts for one third of all occupational musculoskeletal injuries and illnesses resulting in work disability. Although two thirds of LBP cases return to work (RTW) within 1 month, about 17% and 7% of cases experience work disability for 1 to 6 months and more than 6 months, respectively. In addition, increased length of disability (LOD) due to LBP is linked to increased likelihood of permanent disability.<sup>27</sup> Medical cost drivers for LBP include early opioid prescribing (within the first 15 days of seeking medical treatment) or early magnetic resonance imaging (MRI) scanning (within the first 30 days of seeking medical treatment).

**Low back pain episode change over time and quality metric performance:** There has been a significant reduction in BWC cases of back pain over the past 20 years. The BWC's 1993 annual report documented 22,574 back injuries, while the 2017 report shows 6,050. The decrease in low back pain injuries (-73%) is a trend similar to the observed decrease in all lost time claims occurring in the same time period (-86%). This pattern slowed to an average annual decrease in number of lost time claims (-2%) and med only claims (-3%) between 2012 and 2017. The reduction in low back pain episode numbers during the study time window was

<sup>26</sup> Duthey, "World Health Organization, Low Back Pain Background Paper."

<sup>27</sup> Shraim et al., "Length of Disability and Medical Costs in Low Back Pain."



greater than patterns observed in BWC claims overall, with LBP episode data showing a 31% decrease in the number of included lost-time episodes.

Low Back Pain	
Quality Metric	5-year Change
Percent of episodes with follow-up visit < 90d	NA*
Percent of episodes with use of CT or MRI	-5%
Percent of episodes with opioids after injury diagnosis	-13%
Percent of episodes with no opioids before injury diagnosis	10%
Percent of episodes with opioids both before & after procedure	-6%
Percent of episodes with administered steroid injections	-2%

*\*5-year change in follow-up visits not reported due to undetectable visit data pre-2015*

Results of quality metrics performance for LBP demonstrate that low back pain episodes had a reduction in prescribed opioids before and after a low back pain episode. We hypothesized that a decrease in prescribed opioid use would correspond to an increase in the use of alternative mechanisms of pain control, such as use of steroid injections for management of back pain, however, this does not appear to be the case and it is likely that other alternatives are used. Although epidural steroid injection is a low risk alternative to relieve pain and can reduce the likelihood of needing surgery<sup>28</sup> when indicated, efficacy is only short term. Thus, while the strategy does not appear to be through the use of steroid injection (reduced by 2%), the lower opiate prescribing patterns observed in the back-pain performance metrics demonstrate that alternatives are being explored in order to manage patients with lumbar pain without using opiates. The observed reductions in opioid prescribing are also likely to have been influenced by changing provider practice, drug utilization review requirements and legislation aimed at reducing opioid dependence and abuse. In light of the observed improvement in opioid prescribing overall, it is possible that future monitoring of opioid prescribing could focus on other indicators of risk, such as the proportion of claims with repeated and/or sustained opioid prescriptions.

<sup>28</sup> Manson, McKeon, and Abraham, "Transforaminal Epidural Steroid Injections Prevent the Need for Surgery in Patients with Sciatica Secondary to Lumbar Disc Herniation."

Year	Average of Episode Medical Spend	1 yr. Change in Average Episode Cost	Count of LBP Episodes	1 yr. Change in average episode number	Percent of episodes with follow-up visit < 90d	Percent of episodes with use of CT or MRI	Percent of episodes with opioids after injury diagnosis	Percent of episodes with no opioids before injury diagnosis	Percent of episodes with opioids both before & after procedure	Percent of episodes with administered steroid injections
2012	\$2,036.51	-	2708	-	N/A	68%	13%	90%	6%	6%
2013	\$1,843.39	-\$193.12	2559	-149	N/A	64%	12%	90%	5%	6%
2014	\$1,202.56	-\$640.83	2390	-169	N/A	57%	9%	92%	3%	3%
2015	\$1,208.97	\$6.41	2170	-220	15%	55%	8%	92%	4%	4%
2016	\$1,315.75	\$106.77	1476	-694	43%	59%	6%	92%	3%	3%
2017	\$1,233.46	-\$82.28	1025	-451	43%	63%	>1%	99%	>1%	4%
<b>Total 5 yr. change</b>		<b>-\$803.05</b>		<b>-1683</b>						

Another positive was the reduction of costly advanced imaging for low back pain, a technique that is strongly discouraged for routine practice.<sup>29</sup> The quality metrics for LBP episodes provide a representative sample of care modalities employed to serve as a proxy indicator of vigilance and pro-active oversight by MCOs. Directional improvement in episode quality metrics demonstrate that MCO efforts to contain cost are not resulting in under-delivery of care or random restriction of services by MCOs.

During the preparation of the report, it was noted that there is a decrease in detected low back pain episodes occurring between 2015 and 2016. Significant validation was undertaken to establish whether the observed reduction in number of LBP claims was truly due to fewer back injuries, or perhaps a failure to adequately detect back pain in the data, occurring as a derivation of the transition from ICD-9 to ICD-10. However, validation of episode data verifies the presence of both ICD-9 and ICD-10 diagnostic codes detected as episode triggers both pre- and post-transition (see LBP data table below). The presence of both ICD-9 and ICD-10 diagnostic codes detected as episode triggers both pre- and post-transition provides validation of proper detection of LBP episodes within the data. Recent reports have indicated the potential for retrospective analyses to be impacted by examination of injuries spanning the ICD-9 to ICD-10 transition.<sup>30</sup> This impact was reported to be primarily observed on injury types that were afforded much greater diagnostic specificity in ICD-10 than ICD-9. BWC has begun the process of ensuring that all remaining data elements in the system are converted from ICD-9 to ICD-10. The findings reported here could be strengthened in the future as additional years of data coded exclusively in ICD-10 format are gathered.

<b>LBP Trigger Code Types by year</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>TOTAL</b>
ICD-10	8	18	47	558	1475	1026	3132
ICD-9	2698	2543	2344	1613	0	1	9199
<b>% ICD-10</b>	<b>0%</b>	<b>1%</b>	<b>2%</b>	<b>26%</b>	<b>100%</b>	<b>100%</b>	<b>25%</b>
<b>% ICD-9</b>	<b>100%</b>	<b>99%</b>	<b>98%</b>	<b>74%</b>	<b>0%</b>	<b>0%</b>	<b>75%</b>
Total	2706	2561	2391	2171	1475	1027	12331
<i>Episode Reduction</i>	-	145	170	220	696	448	
<i>Percent drop</i>	-	5%	7%	9%	32%	30%	

<sup>29</sup> Graves et al., "Impact of an Advanced Imaging Utilization Review Program on Downstream Health Care Utilization and Costs for Low Back Pain."

<sup>30</sup> Panozzo et al., "Early Impact of the ICD-10-CM Transition on Selected Health Outcomes in 13 Electronic Health Care Databases in the United States."

**Return to Work Outcomes:** Low back pain is the most common reason for long-term absence and work disability in the US and other industrialized countries.<sup>31, 32</sup> A recent evaluation of RTW in six countries for employees with low back pain showed a three-fold difference in return to work rates among injured workers in different environments. Similar studies have reported mean duration of absence ranging from 1.2-21 days. Multiple studies have shown that the single most important factors in achievement of sustained return to work following back injury are work interventions and policies permitting adaptation to individual injured worker needs.<sup>33, 34</sup>

In a meta-analysis of RTW following low back pain, approximately 20% of workers experienced more than or equal to 30 days absence in a 12-month period.<sup>35</sup> Studies from other payer environments have demonstrated great variability in mean and median duration of absence both across different payer environments and across different care settings. For example, in an analysis of duration of absence in three different payer environments (general outpatient setting, workplace injury and private health insurer database) the number of days absent ranged from 2.6 to 84 days in studies conducted in a general outpatient setting, from 1.2 to 41.1 days in private insurer and from 5.0 to 21.2 days in injured worker populations. Median duration of work absence (nine studies) ranged from 14 to 24 days in studies conducted in back pain populations identified from healthcare settings, from 7 to 61 days in database studies, and from 5 to 28 days in workplace samples with back pain.<sup>36</sup> The most comprehensive of the studies conducted in a workers' compensation environment reported a median duration of absence of 61 days.<sup>37</sup> In a study among 1,321 US workers who filed a workers' compensation claim for back pain, 30% of the workers experienced multiple work absences within the following year.

Reported durations of absence due to low back injury in different payer environments			
Summary data of 45 studies including 188,281 patients			
	General outpatient	Workers' compensation	Private health insurer
mean	2.6 to 84 days	5.0 to 21.2 days	1.2 to 41.1 days
median	14 to 24 days	5 to 28 days	7 to 61 days
Source: Wynne-Jones et al., "Absence from Work and Return to Work in People with Back Pain."			

<sup>31</sup> Hashemi, Webster, and Clancy, "Trends in Disability Duration and Cost of Workers' Compensation Low Back Pain Claims (1988-1996)."

<sup>32</sup> McLellan et al., "Using Electronic Health Records and Clinical Decision Support to Provide Return-to-Work Guidance for Primary Care Practitioners for Patients With Low Back Pain."

<sup>33</sup> Anema et al., "Can Cross Country Differences in Return-to-Work after Chronic Occupational Back Pain Be Explained?"

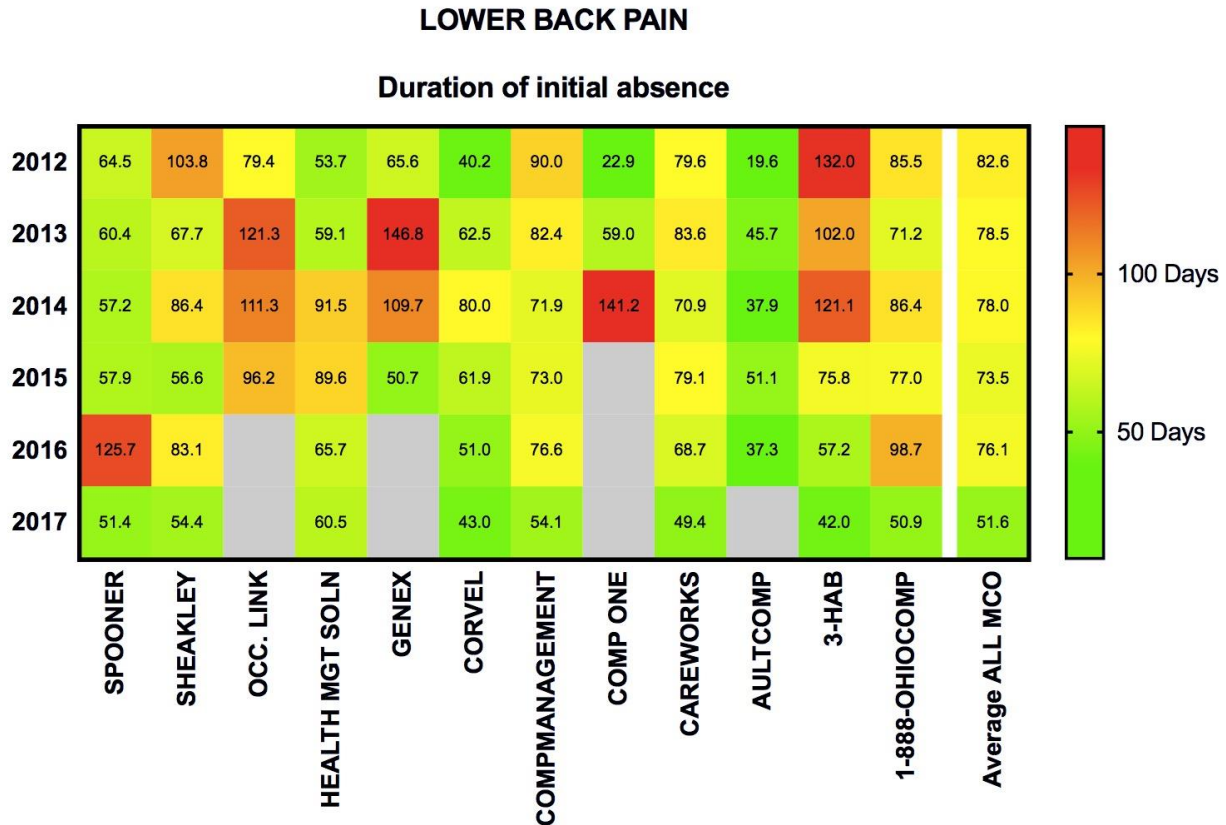
<sup>34</sup> Anema et al., "The Effectiveness of Ergonomic Interventions on Return-to-Work after Low Back Pain; a Prospective Two Year Cohort Study in Six Countries on Low Back Pain Patients Sicklisted for 3-4 Months."

<sup>35</sup> Wynne-Jones et al., "Absence from Work and Return to Work in People with Back Pain."

<sup>36</sup> Wynne-Jones et al.

<sup>37</sup> Hashemi, Webster, and Clancy, "Trends in Disability Duration and Cost of Workers' Compensation Low Back Pain Claims (1988-1996)."

For this report, we measured return to work outcomes on all claims as well as on lost time claims only. The heat map which follows shows the trend of duration of absence from 2012 to 2017 by MCO for all low back pain claims (including both lost time and med only), with duration of absence normalized to one year. Data for 2017 is shown in the heatmap but is likely to be incomplete due to delay in data collection at time of reporting.



Initial absence was calculated as the difference (in days) between the LDW and the first RTW reported following the episode trigger diagnosis. Data represent averages for MCO with >10 valid episodes, grouped by MCO. Fields colored grey indicate MCOs with insufficient record number. MCOs that are no longer operational in the state are not represented.

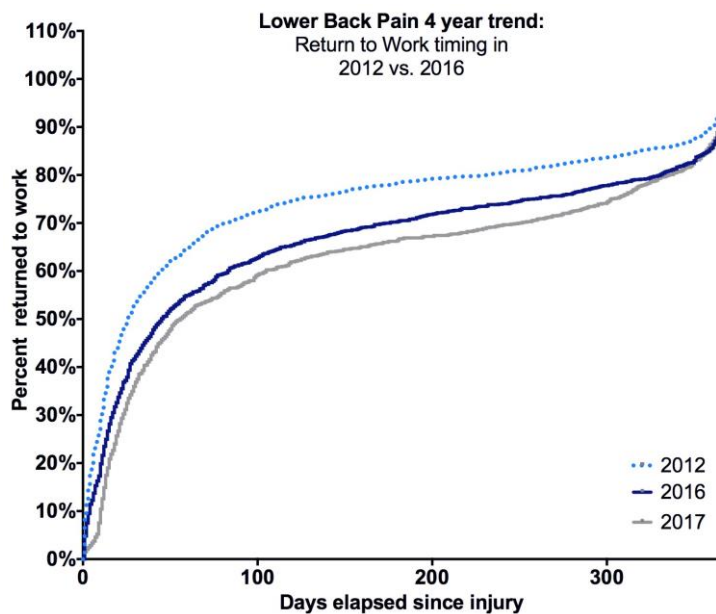
*\*2017 data incomplete at time of report*

As illustrated in this heat map, average duration of disability has been decreasing when we look at all claims combined. Duration of absence has decreased from an average of 82.6 days to 51.6 days for low back pain WC claims in Ohio. However, when we only look at lost time claims, we can see that duration of absence has not decreased over time:

Low Back Pain Episodes		Returned to work within first year			
		No		Yes	
All	12328	1145	9%	11297	91%
2012	2708	220	8%	2488	92%
2013	2559	226	9%	2333	91%
2014	2390	230	10%	2160	90%
2015	2170	194	9%	1976	91%
2016	1476	166	11%	1310	89%
2017*	1025	109	11%	916	89%

\* 2017 data incomplete at time of report

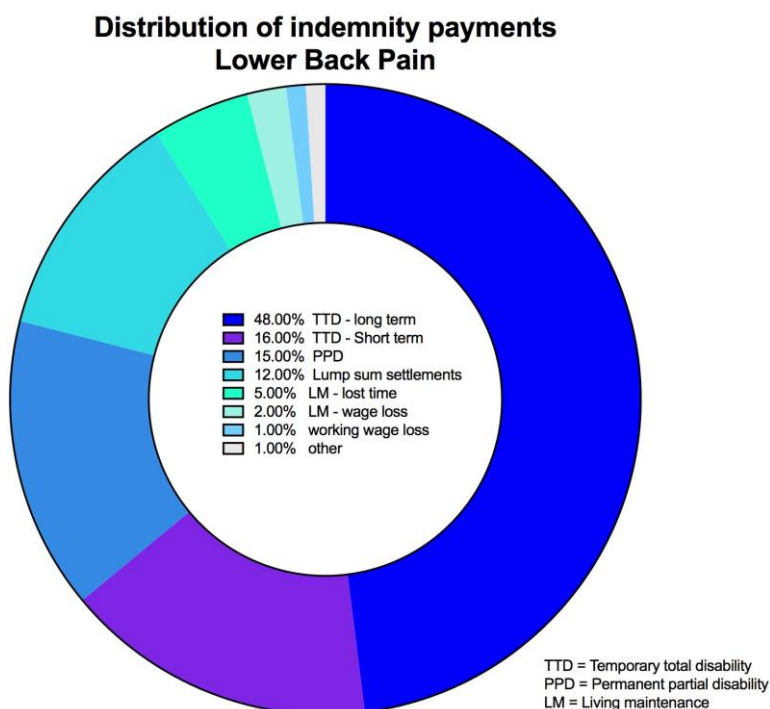
The accompanying line graph illustrates the percentage of injured workers who have returned to work within a certain number of days. We can see that a greater percentage of workers had returned to work by any given number of days in 2012 than in 2016 & 2017. In order to allow for the possibility that 2017 data may have had outstanding indemnity payment data not represented in the database at the time this report was prepared, we have conducted indemnity payment analyses for 2017 and 2016, creating 4 and 5-year comparisons relative to 2012. Data is presented both 2016 and 2017 and associated statistical analyses were conducted to ensure that all reported increases are significant ( $p \leq 0.05$ ) using both 2012 vs. 2016 and 2012 vs. 2017 data sets.



Kaplan-Meier analysis was used to investigate the duration (days) of work absence following injury for each episode type. Data represent measurement in days for all valid, lost time episodes between 2012 – 2016 & 2017, grouped by year of occurrence. Measurements were capped at 365 days following initial trigger injury and data were normalized to determine percent returned to work at defined times following injury. Data were evaluated and compared using the Mantel-Cox, Log-rank and Pearson's Chi-square methods data to determine significant difference ( $p \leq 0.05$ ) and trends over time.

2017 data incomplete at time of report.

These trends inform us that of all Ohio WC low back pain claims, those with a duration of absence of more than seven days (lost time claims) are increasing in their duration of disability. Because it is the MCO's responsibility to manage return to work coordination, this affords an opportunity for MCOs to reassess the variables that go into their RTW efforts in an effort to determine why duration of absence for lost time claims has been increasing and aim to reverse this trend.



*\*2017 data incomplete at time of report*

In addition to influencing RTW timing, duration of disability also influences indemnity payments. Specifically, the longer an injured worker is out of work, the more financial responsibility the BWC has to them through temporary total and living maintenance (TT/LM) indemnity payments. In order to determine whether savings in indemnity payments could potentially be linked to MCO actions, we evaluated what proportion of total indemnity payments were linked to the duration of disability. For back episodes, temporary total and permanent partial disability were the two most significant categories of indemnity payment for this

episode type. Although MCOs are not

able to influence compensation paid for permanent partial disability, they are able to indirectly influence temporary total disability payments through minimizing the length of disability. The findings therefore indicate that MCOs are positioned to have a significant impact on the total costs of back injury claims through reducing the duration of disability and thus the number of days for which wage replacement is necessary.

For all three episodes in this study, it was observed that the average amount of indemnity payments of type TT/LM have increased in the first year following the injury. This corresponds with the finding that average duration of absence in the first year following injury has increased.

For low back pain episodes, the average amount of TT/LM indemnity paid in the first year following injury has increased since 2012. Average indemnity of this type paid in the first year following injury has increased from \$3,743.19 in 2012 to \$4,632.06 in 2016 (a 23% increase in 4 years). Although data for 2017 are considered to be incomplete at the time of report preparation, preliminary analysis of 2017 data demonstrate a similar finding to that observed in 2016: a 20% increase from 2012 to 2017. Thus, the per-episode impact of medical savings for

low back pain episodes of \$720.76 - \$803.04 are diminished when compared to increased one-year TT/LM indemnity costs of the same amount, or greater (\$767.11 - \$888.86) that are, in part, associated with the increased duration of absence.

The following table shows the trend in TT/LM indemnity payments per claim from 2012 to 2017 the first year following the injury. Data for 2017 is shown in the table but is likely to be incomplete due to likely claim immaturity at the time of data collection for this report.

Avg. TT/LM payments, Low Back Pain Episodes	
2012	\$3,743.20
2013	\$4,062.72
2014	\$3,920.68
2015	\$4,175.01
2016	\$4,632.06
2017 *	\$4,510.31

*\* 2017 Data incomplete at time of report*

This table demonstrates the financial impacts of the observed increased duration of absence. Longer absences are associated with increased TT/LM indemnity payments, which make up a substantial portion of total claim costs and represent an indirect material effect on BWC's fiduciary responsibilities to employers. According to the Ohio BWC's compensation rate chart<sup>38</sup>, the statewide average weekly wage (AWW) increased by 9% between 2012 and 2016, from \$809.00 in 2012 to \$855.00 in 2016. This 9% increase in AWW undoubtedly had an impact on the observed increase in average TT/LM indemnity payments per claim, as this payment is issued at a rate proportional to the injured worker's salary. Although AWW has increased by 9%, indemnity payments for low back pain episodes has increased by 23% indicating that this increase comes from the combined effects of AWW and increased duration of absence.

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<sup>38</sup> "Ohio BWC Compensation Rate Chart 2010-2018."



**MCO Comparison:** In addition to an aggregate review of MCO performance, we also analyzed performance at the individual MCO level in order to compare their ability to medically manage claims by including quality metrics and practice cost containment. We compared MCOs by including claims with start dates from 2012 to 2017 capped at one year of clinical treatment. We can compare performance by standardizing outputs through calculation of a Z-score for each percentage and comparing the Z-score against expected performance within an alpha level of 5%. In short, this means that we can calculate a range in which we expect MCOs to perform based on the existing data, and from that we can find MCOs that perform unusually well or unusually poorly. We will compare MCO performance on cost savings and on quality metrics. Cost savings (indicated in this table by total episode spend, average number of items on a detailed invoice, and average cost per item on a detailed invoice) can act as a proxy for utilization review. Quality metrics can indicate the capacity of MCOs to oversee and recommend best clinical practices in medical case management.

We can infer from comparison data that there are MCO-internal variables that impact cost and quality metric performance. If these outcomes were based solely on external variables (such as fee schedules or provider decisions), we would not see any statistically significant outliers. However, the degree of variability in the data when comparing MCOs shows us that there is some meaningful level of influence which MCOs have over these outcomes. The table on the following page shows the results of this analysis.

2012-2017 Low Back Pain Performance (Valid lost-time claims only)										
MCO***	Episode Spend			Quality Metrics						RTW **
	Avg. Episode Spend	Avg. Detail Item/ Invoice	Avg. Cost/ Detail Item	QM 1	QM 2	QM 3a	QM 3b	QM3c	QM 4	Avg. Days Absent
1-888-OhioComp	\$1,459.18	34.70	\$42.05	NA *	60.3%	6.6%	94.4%	2.0%	4.3%	89 **
3-Hab	\$1,588.39	31.46	\$50.49	NA *	63.8%	10.0%	91.5%	3.4%	4.2%	115 **
Aultcomp	\$1,562.81	26.44	\$59.10	NA *	60.1%	11.0%	92.0%	2.5%	3.7%	62 **
Careworks	\$1,484.69	24.60	\$60.35	NA *	58.0%	8.6%	91.8%	3.7%	3.9%	101 **
Comp One	\$1,430.83	29.71	\$48.16	NA *	65.5%	11.5%	88.5%	2.3%	9.2%	92 **
CompManagement	\$1,588.40	28.43	\$55.87	NA *	63.5%	9.1%	91.0%	4.1%	5.0%	98 **
Corvel	\$1,458.09	33.55	\$43.45	NA *	60.2%	9.1%	93.9%	2.6%	3.9%	100 **
Genex	\$1,475.00	18.80	\$78.44	NA *	58.8%	11.8%	92.2%	3.9%	5.9%	131 **
HMS	\$1,517.26	23.11	\$65.67	NA *	62.9%	9.0%	93.9%	3.2%	4.3%	100 **
OHL	\$1,974.62	32.24	\$61.25	NA *	69.9%	13.5%	93.2%	3.0%	6.0%	108 **
Sheakley	\$1,566.30	28.84	\$54.31	NA *	65.8%	11.3%	89.0%	5.6%	5.1%	107 **
Spooner	\$1,463.16	34.74	\$42.12	NA *	61.4%	11.0%	92.4%	3.4%	5.0%	100 **

\* 5-year change in follow-up visits not reported due to undetectable visit data pre-2015

\*\* 2017 RTW data incomplete at time of report

\*\*\* MCOs that are no longer operational in Ohio BWC system are not displayed

**Avg. Episode Spend:** The average cost of medical services for an episode

**Avg. Detail Item/Invoice:** The average number of medical services on a detailed invoice

**Avg. Cost/Detail Item:** The average cost of a medical service on a detailed invoice

**QM 1:** Percent of episodes with follow-up visit within 90 days


**QM 2:** Percent of episodes with use of CT or MRI

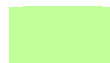
**QM 3a:** Percent of episodes with opioids after injury diagnosis

**QM 3b:** Percent of episodes with no opioids before injury diagnosis

**QM 3c:** Percent of episodes with opioids both before and after procedure

**QM 4:** Percent of episodes with administered steroid injections

 Red shading indicates a statistically significantly poor-performing MCO

 Green shading indicates a statistically significantly well-performing MCO

## 6.2.3 Shoulder

**Population:** DXC examined a total of 67,118 shoulder Injury episodes for this study. Of these, 10,847 episodes were excluded for medical or business reasons leaving a total of 56,271 valid/included shoulder injury episodes. To restrict our analysis to claims for which the MCOs would have a significant opportunity to impact the course of care, claims of type “medical only” were excluded from the analysis. The data presented here represents 9,769 valid lost time shoulder injury episodes occurring between 2012 and 2017.

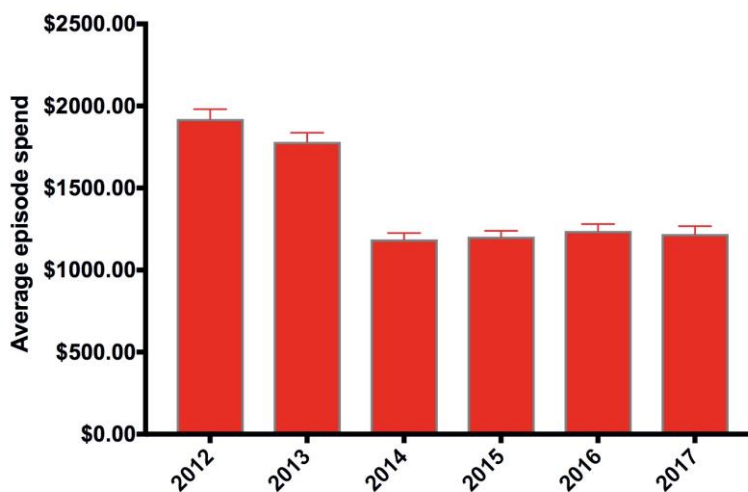
Shoulder Injury	2012	2013	2014	2015	2016	2017*	Average
Total episodes identified	12270	12115	12138	11374	10358	8863	11186
<b>Total Valid Included episodes</b>	<b>1722</b>	<b>1892</b>	<b>1750</b>	<b>1754</b>	<b>1482</b>	<b>1169</b>	<b>1628</b>
Total invalid excluded episodes	3759	1496	1554	1450	1350	1238	1808
Percent of episodes excluded	31%	30%	31%	30%	30%	27%	30%
Percent of episodes medical only	49%	49%	50%	50%	52%	60%	52%
Percent of episodes lost time	51%	51%	50%	50%	48%	40%	48%

\*2017 data incomplete at time of report preparation

**Episode Spend:** The total medical spend for shoulder injury episodes was reduced by an average of \$701.00 per episode (36% reduction 2012-2017) from \$1921.00 to \$1220.00 per episode. The number of shoulder injury episodes decreased by 32% during the same time period, from an average of 1,722 to 1,168 valid lost-time episodes annually.

Of indemnity payments issued to injured workers with shoulder injuries, payments of type TT/LM were the most significant contributor to total indemnity spend for shoulder episodes (66%). This indicates that MCOs can significantly impact the total amount of indemnity paid by implementing effective return to work policies in addition to being able to contain the total medical cost of a claim because temporary total disability is directly related to the length of time that an injured worker is disabled. Conversely, MCOs are not able to influence compensation paid for permanent partial disability (the third most significant contributor to indemnity payments for this episode). For example, if 66% of the indemnity payment were for an indemnity category such as permanent total disability, it would be very

**Shoulder Injury**  
Average episode spend by year 2012-2017



Data represent average cumulative episode spend + 95% C.I. for valid, lost time episodes grouped according to date of episode start

difficult for MCOs to have much impact on these costs. The findings therefore indicate that MCOs are positioned to have a significant impact on the total costs of shoulder injury claims through reducing the duration of disability and thus the number of days for which wage replacement is necessary.

The impact of skillful and efficient medical management of shoulder injuries has the potential to yield great benefit to the MCO environment and BWC stakeholders, as shoulder joint injuries are the third most common musculoskeletal complaint, after low back pain and knee pain, for which patients seek medical attention<sup>39</sup> and are among the most expensive claim types.<sup>40</sup> A 2014 study of shoulder injury claims showed the national average for shoulder injury (in 2010 dollars) to be \$3,911.00 in medical cost and \$12,041.00 in total compensation.<sup>41</sup>

This contrasts with the average total episode costs calculated in this report. Adjusted for inflation,<sup>42</sup> Ohio's average shoulder episode costs are well below the 2014 national average rate reported for shoulder injuries in the workers' compensation system (72% below average for medical and 45% below average for total costs).

It has been reported previously that patients with workers' compensation-related shoulder injuries have worse outcomes and lower rates of satisfaction than other patient groups outside of workers' compensation.<sup>43</sup> However, in this study we saw very high rates of satisfaction for all participants (not stratified by injury type) and our average cost per episode was well below the national average.

Quality metric performance was observed to have improved for shoulder injuries as well. In addition to measurement of medications and prescribing practices with high risk to the injured workers, the shoulder injury episode is designed to look for conservative use of diagnostician imaging.

For example, the quality metric measuring "incremental imaging" measures the proportion of episodes for which alternative imaging modalities (such as ultrasound, which is less costly but has similar diagnostic accuracy) are employed prior to using an MRI. Additionally, the shoulder episode measures the proportion of episodes for which patients received multiple MRIs during the episode. Monitoring the use of such value-adds permits exploration of the MCO's ability to impact use of low-value, high risk/cost services.

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<sup>39</sup> Mitchell et al., "Shoulder Pain."

<sup>40</sup> Mroz et al., "Frequency and Cost of Claims by Injury Type from a State Workers' Compensation Fund from 1998 through 2008."

<sup>41</sup> Ibid.

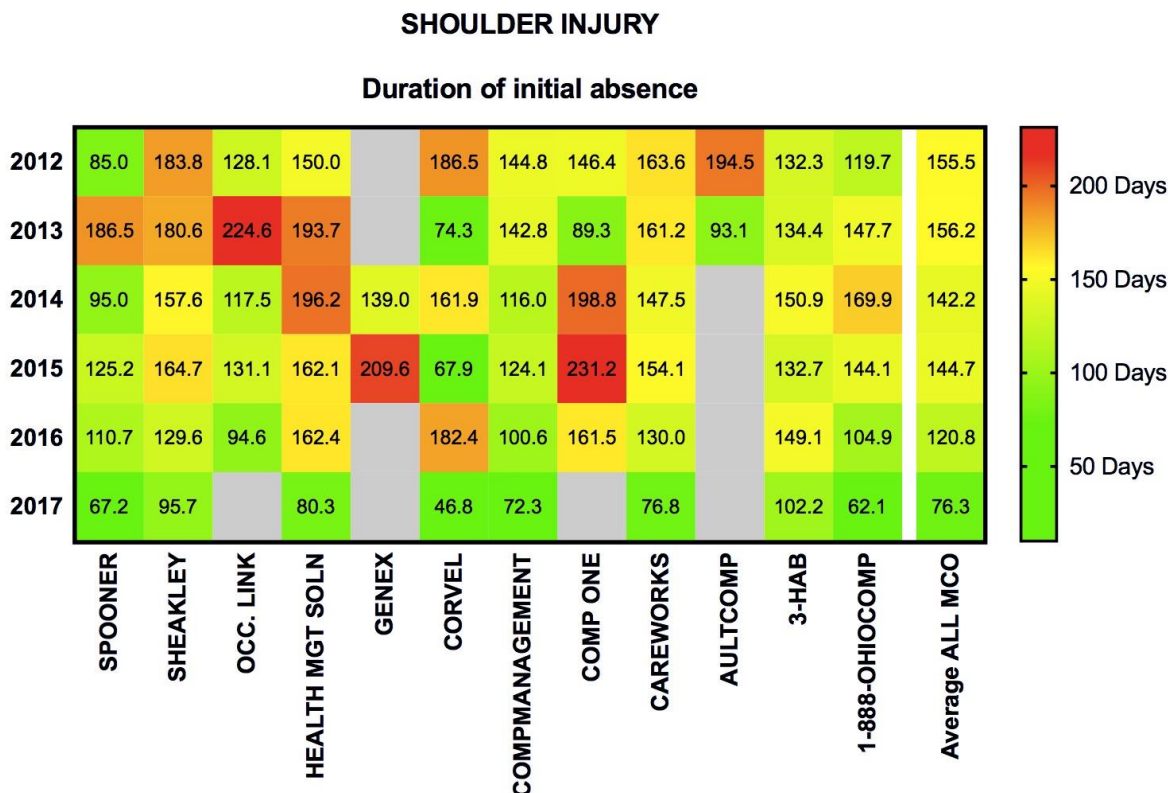
<sup>42</sup> "Consumer Price Index, Medical Cost Inflation."

<sup>43</sup> Morris et al., "Workers' Compensation Claims and Outcomes after Reverse Shoulder Arthroplasty."

Year	Average of Episode Medical Spend	1 yr. Change in Average Episode Cost	Count of Shoulder Episodes	1 yr. Change in average episode number	Percent of episodes with opioids after injury diagnosis	Percent of episodes with no opioids before injury diagnosis	Percent of episodes with opioids both before and after	Percent of episodes with use of Incremental Imaging	Percent of episodes with MRI used	Percent of episodes with concurrent Rx for Opioids and Benzo.	Percent of episodes with repeat ED visit in <15 d
2012	\$1,920.95	-	1722	-	12%	92%	5%	43%	56%	1%	43%
2013	\$1,781.08	-\$139.87	1892	170	13%	91%	5%	45%	60%	1%	40%
2014	\$1,187.48	-\$593.60	1750	-142	11%	91%	4%	35%	59%	1%	25%
2015	\$1,203.64	\$16.16	1754	4	11%	93%	4%	35%	60%	0%	23%
2016	\$1,238.53	\$34.89	1482	-272	7%	94%	3%	35%	60%	0%	26%
2017	\$1,219.68	-\$18.85	1168	-314	2%	99%	1%	37%	63%	0%	24%
<b>Total 5 yr. change</b>		<b>-\$701.27</b>		<b>-554</b>							

Shoulder Injury	
Quality Metric	5-year Change
Percent of episodes with opioids after injury diagnosis	-10%
Percent of episodes with no opioids before injury diagnosis	7%
Percent of episodes with opioids both before and after	-4%
Percent of episodes with use of Incremental Imaging	-6%
Percent of episodes with MRI used	7%
Percent of episodes with concurrent Rx for Opioids and Benzo.	-1%
Percent of episodes with repeat ED visit in <15 d	-19%

**Return to Work Outcomes:** When looking at overall duration of disability for both lost time and med only claims, we see an overall trend in decreasing duration. The following heat map shows this trend:



Initial absence was calculated as the difference (in days) between the LDW and the first RTW reported following the episode trigger diagnosis. Data represent averages for MCO with >10 valid episodes, grouped by MCO. Fields colored grey indicate MCOs with insufficient record number. MCOs that are no longer operational in the state are not represented.

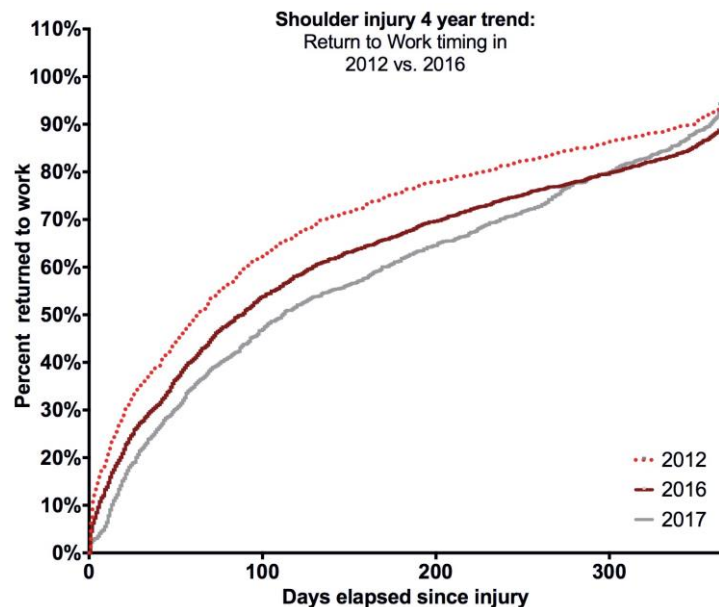
*\*2017 data incomplete at time of report*

Like low back pain, we see the opposite trend for lost time claims only. For Ohio shoulder episodes occurring between 2012 and 2016, an average of 93% of injured workers with lost time claims returned to their workplace within the first year after their injury. This percentage decreased from 94% in 2012 to 90% in 2016, indicating that a lower proportion of injured workers with lost time claims are returned to work within one year. Data for 2017 is shown in the heatmap, but is likely to be incomplete due to likely claim immaturity at the time of data collection for this report.

Shoulder episodes total		Returned to work within first year			
		No		Yes	
All Years	9768	727	7%	9197	93%
2012	1722	106	6%	1616	94%
2013	1892	131	7%	1761	93%
2014	1750	126	7%	1624	93%
2015	1754	134	8%	1620	92%
2016	1482	151	10%	1331	90%
2017*	1168	79	7%	1089	93%

\* Data incomplete at time of report

For all three episodes in this study, the average amount of indemnity payments of type TT/LM have increased in the first year following the injury. This corresponds with the finding that average duration of absence in the first year following injury has increased. In order to allow for the possibility that 2017 data may have had outstanding RTW or indemnity payment data not represented in the database at the time this report was prepared, we have conducted indemnity payment analyses for 2017 and 2016, creating 4 and 5-year comparisons relative to 2012. Data is presented for both 2016 and 2017 and associated statistical analyses were conducted to ensure that all reported increases are significant ( $p \leq 0.05$ ) using both 2012 vs. 2016 and 2012 vs. 2017 data sets.

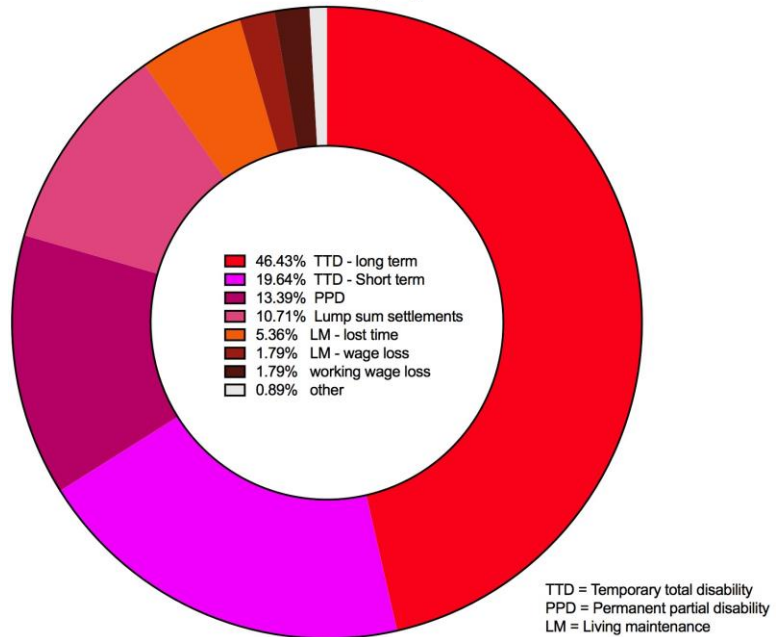


Kaplan-Meier analysis was used to investigate the duration (days) of work absence following injury for each episode type. Data represent measurement in days for all valid, lost time episodes between 2012 – 2016 & 2017, grouped by year of occurrence. Measurements were capped at 365 days following initial trigger injury and data were normalized to determine percent returned to work at defined times following injury. Data were evaluated and compared using the Mantel-Cox, Log-rank and Pearson's Chi-square methods data to determine significant difference ( $p \leq 0.05$ ) and trends over time.

2017 data incomplete at time of report.

For Shoulder Injury episodes, the average amount of TT/LM indemnity paid in the first year following injury has increased since 2012. Average indemnity of this type paid in the first year following injury has increased from \$4,642.00 in 2012 to \$5,696.49 in 2016 (a 23% increase over 4 years). Although data for 2017 are considered to be incomplete at the time of report preparation, preliminary analysis of 2017 data demonstrate a similar finding to that observed in 2016: a 19% increase from 2012 (to \$5,549.19 per episode). Thus, the per-episode impact of medical savings for shoulder injury episodes (between \$682.41 - \$701.26) are diminished when compared to increased TT/LM indemnity costs of \$907.19 - \$1,054.49 associated with an increased duration of absence.

**Distribution of indemnity payments  
Shoulder Injury**



*\*2017 data incomplete at time of report*

The following table shows the trend in TT/LM indemnity payments per episode from 2012 to 2017 with duration of absence normalized to one year. Data for 2017 is shown in the table but is likely to be incomplete due to likely claim immaturity at the time of data collection for this report.

Avg. TT/LM payments, Shoulder Injury Episodes	
2012	\$4,642.00
2013	\$5,269.93
2014	\$5,010.01
2015	\$5,630.40
2016	\$5,696.49
2017 *	\$5,549.20

*\*2017 data incomplete at time of report*

This table demonstrates the financial impacts of the observed increased duration of absence. Longer absences are associated with increased TT/LM indemnity payments, which make up a substantial portion of total claim costs and represent an indirect material effect on



BWC's fiduciary responsibilities to employers. According to the Ohio BWC's compensation rate chart<sup>44</sup>, the statewide average weekly wage (AWW) increased by 9% between 2012 and 2016, (from \$809.00 in 2012 to \$855.00 in 2016). This 9% increase in AWW undoubtedly had an impact on the observed increase in average TT/LM indemnity payments per claim, as this payment is issued at a rate proportional to the injured worker's salary. Although AWW has increased by 9%, indemnity payments for shoulder injury episodes have increased by 23% in the same time period, indicating that this increase in TT/LM indemnity payments comes from the combined effects of AWW and increased duration of absence.

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<sup>44</sup> "Ohio BWC Compensation Rate Chart 2010-2018."

## MCO Comparison:

2012-2017 Shoulder Injury Performance (Valid lost-time claims only)											
MCO **	Episode Spend			Quality Metrics							RTW *
	Avg. Episode Spend	Avg. Detail Item/ Invoice	Avg. Cost/ Detail Item	QM 1a	QM 1b	QM 1c	QM 2a	QM 2b	QM 3	QM 4	Avg. Days Absent
1-888-OhioComp	\$1,417.16	24.07	\$58.87	7.6%	94.8%	3.3%	36.9%	55.7%	0.3%	34.2%	108 *
3-Hab	\$1,407.11	21.00	\$67.01	9.5%	92.9%	4.1%	41.7%	61.6%	0.3%	30.2%	126 *
Aultcomp	\$1,392.70	16.75	\$83.13	6.3%	94.3%	2.3%	40.6%	69.1%	0.6%	19.4%	113 *
Careworks	\$1,414.02	17.74	\$79.70	9.7%	92.4%	4.1%	37.6%	59.0%	0.4%	29.2%	118 *
Comp One	\$1,341.48	22.28	\$60.22	6.3%	87.5%	3.8%	32.5%	47.5%	0.0%	32.5%	102 *
CompManagement	\$1,461.72	19.54	\$74.79	9.6%	93.6%	3.5%	39.7%	59.4%	0.6%	30.5%	116 *
Corvel	\$1,459.80	26.52	\$55.04	9.6%	91.8%	3.4%	41.1%	58.2%	0.0%	24.7%	114 *
Genex	\$1,492.58	16.07	\$92.88	20.9%	86.0%	14.0%	46.5%	74.4%	2.3%	32.6%	161 *
HMS	\$1,480.96	17.57	\$84.29	9.2%	95.3%	1.2%	32.4%	60.2%	0.2%	25.8%	113 *
OHL	\$1,299.37	16.67	\$77.94	6.3%	96.1%	2.3%	36.7%	51.6%	0.0%	39.8%	95 *
Sheakley	\$1,470.78	19.72	\$74.58	12.1%	91.8%	5.0%	41.9%	64.2%	0.8%	28.5%	123 *
Spooner	\$1,328.87	25.68	\$51.75	9.7%	92.9%	2.9%	36.2%	55.7%	1.3%	37.9%	125 *

\* 2017 RTW data incomplete at time of report

\*\* MCOs that are no longer operational in Ohio BWC system are not displayed

**Avg. Episode Spend:** The average cost of medical services for an episode

**Avg. Detail Item/Invoice:** The average number of medical services on a detailed invoice

**Avg. Cost/Detail Item:** The average cost of a medical service on a detailed invoice

**QM 1a:** Percent of episodes with opioids after procedure

**QM 1b:** Percent of episodes with no opioids before procedure


**QM 1c:** Percent of episodes with opioids before and after procedure

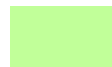
**QM 2a:** Percent of episodes with incremental imaging

**QM 2b:** Percent of episodes with MRI

**QM 3:** Percent of episodes with concurrent opioids and benzos

**QM 4:** Percent of episodes with repeat ED visit in less than 15 days

 Red shading indicates a statistically significantly poor-performing MCO

 Green shading indicates a statistically significantly well-performing MCO

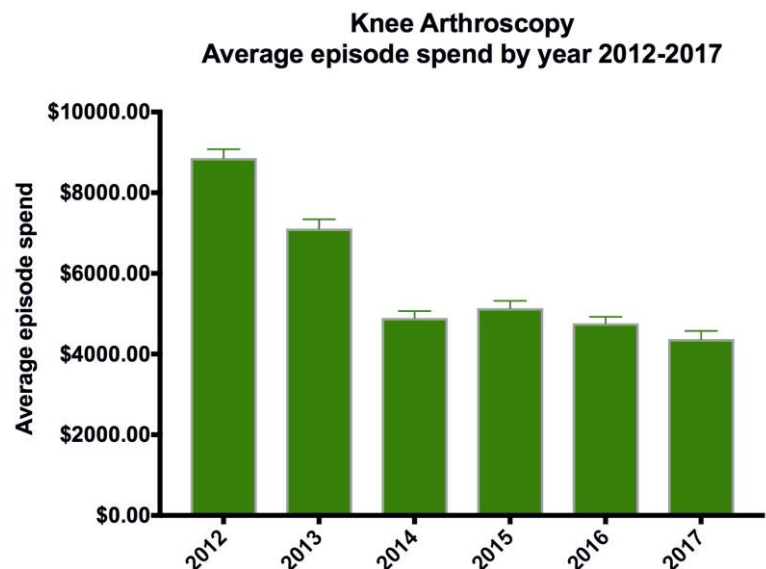
## 6.2.4 Knee

**Population:** DXC examined a total of 7,211 knee arthroscopy episodes for this study. Of these, 742 episodes were excluded for medical or business reasons leaving a total of 6,469 valid/included knee arthroscopy episodes. To restrict our analysis to claims for which the MCOs would have a significant opportunity to impact the course of care, claims of type “medical only” were excluded from the analysis. The data presented here represents 4,965 valid lost time knee arthroscopy episodes occurring between 2012 and 2017.

Knee Arthroscopy	2012	2013	2014	2015	2016	2017*	Average
Total episodes identified	1363	1632	1255	1168	1054	739	1202
<b>Total Valid Included episodes</b>	<b>956</b>	<b>981</b>	<b>897</b>	<b>874</b>	<b>733</b>	<b>525</b>	<b>828</b>
Total invalid excluded episodes	269	138	113	89	88	45	124
Percent of episodes excluded	16%	10%	9%	8%	8%	6%	10%
Percent of episodes medical only	13%	13%	12%	13%	15%	19%	14%
Percent of episodes lost time	88%	87%	88%	87%	85%	81%	86%

\*2017 data incomplete at time of report preparation

**Episode Spend:** The total medical spend for knee arthroscopy episodes was reduced by an average of \$4,484 per episode (51% reduction 2012-2017) from \$8,858.00 in 2012 to \$4,374.00 in 2017. Of this reduction, the majority was observed in episodes reported in years 2012, 2013 and 2014. Overall medical spend has remained constant in subsequent years. The observed medical cost reduction corresponds with BWC implementation of a reduced fee schedule. 63% of the total 5-year reduction in episode medical spend occurred in the category of hospital services and was observed in 2012-2014. Conversely, cost associated with physician services decreased only 14% in the same time period. Collectively, savings in hospital-billed services account for 68% of the reduction in medical costs associated with this episode, while



Data represent average cumulative episode spend + 95% C.I. for valid, lost time episodes grouped according to date of episode start

physician-billed services account for only 20%. This is substantially different from observations in other episodes, where savings were distributed almost equally between the two categories of billing. The pattern of savings in this episode indicates that the BWC fee schedule may have the most significant impact on savings associated with knee arthroscopy, a finding consistent with a 2017 report from WCRI, discussed further below. The number of knee arthroscopy episodes decreased by 45% during the same time period, from an average of 956 to 525 valid lost-time episodes annually.

The Workers Compensation Research Institute (WCRI) 2017 medical price index report examined the trends in costs of medical services related to arthroscopic surgeries. This report demonstrated that nationally, the costs of workers' compensation knee arthroscopy is declining, specifically in states that have negotiated fee schedules. The report stated that negotiated fee schedules are the most important factor in states' ability to control the increasing costs of outpatient surgery such as knee arthroscopy. Fee schedules are an element of the Ohio workers' compensation system and the data from this analysis also show that the overall cost of knee arthroscopy episodes is decreasing.

The largest reductions in average medical spend between 2012 and 2017 were observed among services billed before the surgical procedure (pre-trigger window) and concurrently with the procedure (trigger window). These two categories account for the majority of direct medical spend in the knee arthroscopy episode. Reductions came specifically in the areas of hospital and physician charges. Spend in the pre-trigger window dropped by 39%, while the trigger window spend dropped by 55%. The trigger window spend category reduced from an average of \$4,721.00 to \$2,110.00 between 2012 and 2017. Spend improvements were also observed in the amount of PPD and LMLT indemnity payments in this episode, which showed reductions from an average of \$2,631.00 to \$1,781.50 and \$1,653.00 to \$896.83 respectively. While fee schedules play an important role, the average number of header and detail items billed per episode dropped from 79 in 2012 to 33 in 2017, indicating that utilization review is likely to have contributed to cost control as well. This reduction was most striking in services billed during the pre-trigger window, while non-surgical episodes had greater reductions observed during the trigger window and follow-up.

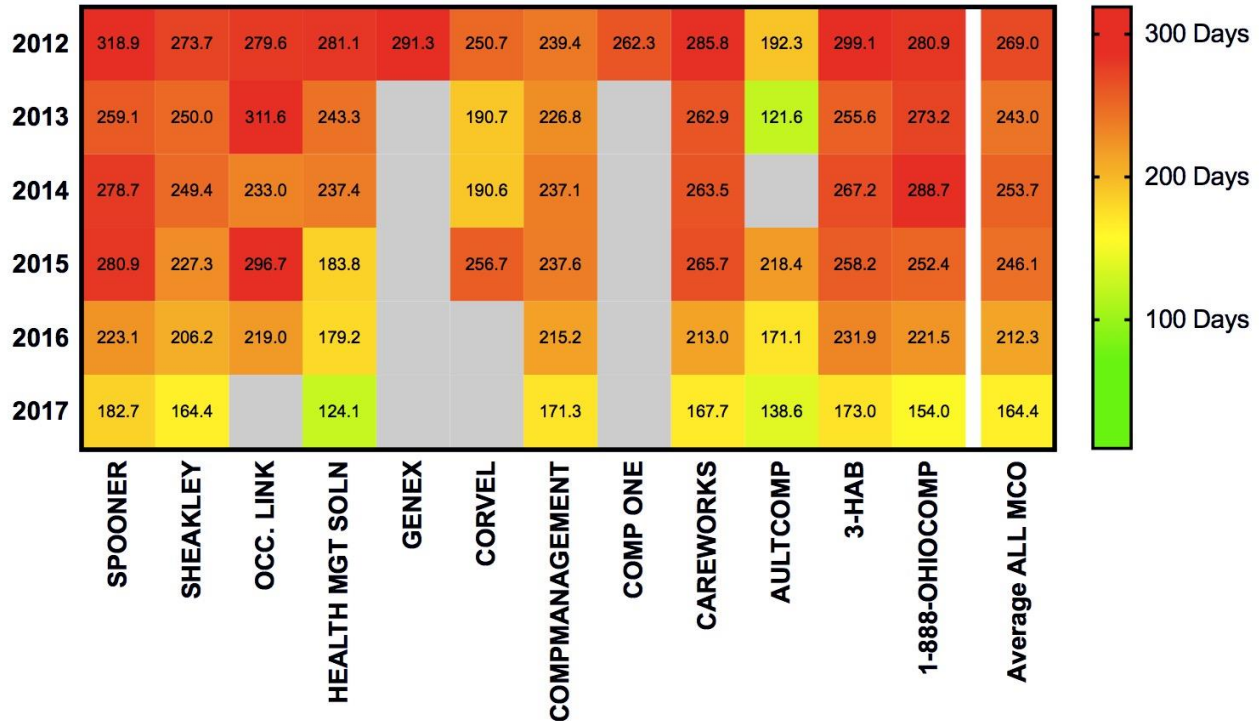
Year	Average of Episode Medical Spend	1 yr. Change in Average Episode Cost	Count of KA Episodes	1 yr. Change in average episode number	Percent of episodes with opioids > 30d after procedure	Percent of episodes with no opioids prior to procedure	Percent of episodes with opioids both before & after procedure	Physical therapy	Percent of episodes with use of multiple MRI	Concurrent Opioids and benzos
2012	\$8,858.00	-	956	-	13%	59%	12%	85%	5%	1%
2013	\$7,111.81	-\$1,746.20	981	25	11%	66%	9%	85%	5%	1%
2014	\$4,894.04	-\$2,217.76	897	-84	10%	63%	9%	85%	5%	1%
2015	\$5,137.75	\$243.71	874	-23	8%	66%	7%	88%	7%	0%
2016	\$4,763.19	-\$374.56	732	-142	5%	73%	4%	87%	4%	1%
2017	\$4,373.95	-\$389.24	525	-207	<1%	95%	<1%	82%	3%	< 1%
<b>Total 5 yr. change</b>		<b>-\$4,484.05</b>		<b>-431</b>						

Knee Arthroscopy	
Quality Metric	5-year Change
Percent of episodes with opioids after procedure	-12%
Percent of episodes with no opioids prior to procedure	36%
Percent of episodes with opioids both before & after procedure	-12%
Physical therapy	-2%
Percent of episodes with use of multiple MRI	-2%
Concurrent Opioids and benzodiazepine prescriptions	-1%

## Return to Work:

### KNEE ARTHROSCOPY

#### Duration of initial absence



Initial absence was calculated as the difference (in days) between the LDW and the first RTW reported following the episode trigger diagnosis. Data represent averages for MCO with >10 valid episodes, grouped by MCO. Fields colored grey indicate MCOs with insufficient record number. MCOs that are no longer operational in the state are not represented.

*\*2017 data incomplete at time of report*

Like both low back pain and shoulder injury episodes, we see two trends. First, the duration of absence for all claims is decreasing over time from 269 days to 164.4 days. However, when we look only at lost time claims, duration of absence is increasing from 5% of injured workers still out of work after a year to 9% of workers still out of work after a year in 2016. Data for 2017 is shown in the heatmap but is likely to be incomplete due to probable claim immaturity at the time of data collection for this report.

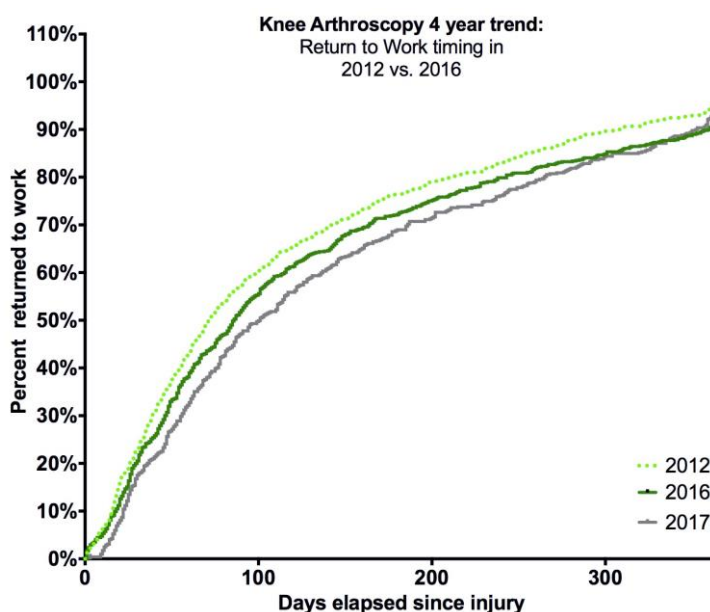
Knee Episodes Total		Returned to work within first year			
		No		Yes	
All	4965	356	7%	4619	93%
2012	956	49	5%	907	95%
2013	981	72	7%	909	93%
2014	897	68	8%	829	92%
2015	874	74	8%	800	92%
2016	732	63	9%	669	91%
2017*	525	30	6%	495	94%

\* 2017 data incomplete at time of report

For all three episodes in this study, the average amount of indemnity payments of type TT/LM have increased in the first year following the injury.

This corresponds with the finding that average duration of absence in the first year following injury has increased. In order to allow for the possibility that 2017 data may have had outstanding RTW or indemnity payment data not represented in the database at the time this report was prepared, we have conducted indemnity payment analyses for 2017 and 2016, creating 4 and 5-year comparisons relative to 2012. Data is presented for both 2016 and 2017 and

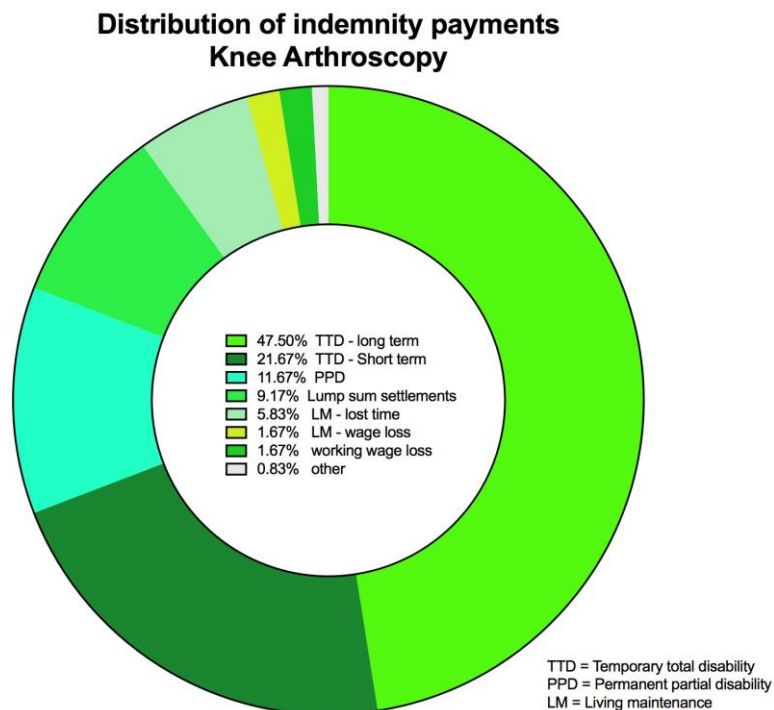
associated statistical analyses were conducted in order to ensure that all reported increases are significant ( $p \leq 0.05$ ) using both 2012 vs. 2016 and 2012 vs. 2017 data sets.



Kaplan-Meier analysis was used to investigate the duration (days) of work absence following injury for each episode type. Data represent measurement in days for all valid, lost time episodes between 2012 – 2016 & 2017, grouped by year of occurrence. Measurements were capped at 365 days following initial trigger injury and data were normalized to determine percent returned to work at defined times following injury. Data were evaluated and compared using the Mantel-Cox, Log-rank and Pearson's Chi-square methods data to determine significant difference ( $p \leq 0.05$ ) and trends over time.

2017 data incomplete at time of report.

For knee arthroscopy episodes, the average amount of TT/LM indemnity paid in the first year following injury has increased since 2012. Average indemnity of this type paid in the first year following injury has increased from \$5,273.25 in 2012 to \$6,544.32 in 2016 (a 24% increase). Preliminary data for 2017 show a 13% increase from 2012 to 2017. Thus, the per-episode impact of medical savings for knee arthroscopy episodes of \$4,094.81-\$4,484.05 must be considered in concert with the increased TT/LM indemnity costs of \$736.91- \$1,271.07 per episode.



*\*2017 data incomplete at time of report*

The following table shows the trend in TT/LM indemnity payments per episode from 2012 to 2017 with duration of absence normalized to one year. Data for 2017 is shown in the table but is likely to be incomplete due to probable claim immaturity at the time of data collection for this report.

Avg. TT/LM payments, Knee Arthroscopy Episodes	
2012	\$5,273.25
2013	\$6,621.82
2014	\$6,885.16
2015	\$6,378.61
2016	\$6,544.33
2017 *	\$6,010.17

*\*2017 data incomplete at time of report*

This table demonstrates the financial impacts of the observed increased duration of absence. Longer absences are associated with increased TT/LM indemnity payments, which make up a substantial portion of total claim costs and represent an indirect material effect on BWC's fiduciary responsibilities to employers. According to the Ohio BWC's compensation rate chart <sup>45</sup>, the statewide average weekly wage (AWW) increased by 9% between 2012 and 2016, from \$809.00 in 2012 to \$855.00 in 2016. This 9% increase in AWW undoubtedly had an impact on

<sup>45</sup> "Ohio BWC Compensation Rate Chart 2010-2018."



the observed increase in average TT/LM indemnity payments per claim, as this payment is issued at a rate proportional to the injured worker's salary. Although AWW has increased by 9%, indemnity payments for knee arthroscopy episodes have increased by 24% indicating that this increase comes from the combined effects of AWW and increased duration of absence.

## MCO Comparison:

2012-2017 Knee Arthroscopy Performance (Valid lost-time claims only)										
MCO **	Episode Spend			Quality Metrics						RTW*
	Avg. Episode Spend	Avg. Detail Item/ Invoice	Avg. Cost/ Detail Item	QM 1a	QM 1b	QM 1c	QM 2	QM 3	QM 4	Avg. Days Absent
1-888-OhioComp	\$6,440.16	67.91	\$94.83	7.3%	70.4%	6.3%	87.6%	6.1%	0.8%	124*
3-Hab	\$5,745.87	48.07	\$119.53	9.1%	69.0%	7.5%	86.6%	0.5%	0.5%	112*
Aultcomp	\$6,056.37	45.39	\$133.44	6.9%	70.3%	5.9%	84.2%	5.9%	0.0%	110*
Careworks	\$5,960.61	50.12	\$118.93	9.5%	66.9%	8.5%	86.6%	4.7%	0.6%	137*
Comp One	\$5,926.73	54.03	\$109.69	6.3%	68.8%	6.3%	87.5%	0.0%	0.0%	90*
CompManagement	\$6,132.25	51.13	\$119.93	7.7%	71.5%	7.1%	84.4%	5.9%	0.8%	119*
Corvel	\$6,138.29	55.21	\$111.18	5.0%	66.0%	4.0%	84.0%	2.0%	2.0%	105*
Genex	\$4,815.11	34.08	\$141.27	5.6%	72.2%	5.6%	88.9%	5.6%	0.0%	133*
HMS	\$5,727.76	40.44	\$141.63	5.9%	67.9%	5.1%	80.6%	5.1%	0.4%	104*
OHL	\$6,750.66	57.66	\$117.07	10.8%	63.5%	8.1%	73.0%	6.8%	1.4%	107*
Sheakley	\$5,922.07	52.35	\$113.13	9.1%	64.5%	8.7%	86.1%	5.4%	1.0%	134*
Spooner	\$5,553.50	58.54	\$94.87	10.4%	67.9%	9.0%	85.8%	3.7%	0.7%	112*

\*2017 RTW data incomplete at time of report

\*MCOs that are no longer operational in Ohio BWC system are not displayed

**Avg. Episode Spend:** The average cost of medical services for an episode

**Avg. Detail Item/Invoice:** The average number of medical services on a detailed invoice

**Avg. Cost/Detail Item:** The average cost of a medical service on a detailed invoice

**QM 1a:** Percent of episodes with opioids after procedure

**QM 1b:** Percent of episodes with no opioids before procedure

**QM 1c:** Percent of episodes with opioids before and after procedure

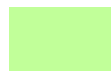
**QM 2:** Percent of episodes with physical therapy

**QM 3:** Percent of episodes with multiple MRIs

**QM 4:** Percent of episodes with concurrent opioids and benzos



Red shading indicates a statistically significantly poor-performing MCO



Green shading indicates a statistically significantly well-performing MCO

## 6.3 Summary of Findings and Recommendations

**Note on tables presented below:** Cumulative impacts in the below tables are calculated for both four and five-year durations. Data representing the five-year span between 2012 - 2017 is presented to provide the most recent data possible. However, due to the potential for claim immaturity, calculations are also shown for the four-year span between 2012 – 2016.

### **Five-year Annual Reductions in Medical Costs, Episode Numbers and Indemnity Payments of Type TT/LM in Studied Episodes, 2012 – 2017**

2017 Episode numbers	Episode Type	5 year reduction in episode numbers	5 year reduction in episode medical cost	Direct medical Cost change <sup>1</sup> (reduced episode numbers & cost)	5 year Increase in disability payments (TT/LM)	Increased Costs from disability <sup>2</sup>	5 year change in Total in payments on episode types <sup>3</sup>
525	Knee Arthroscopy	431	↓ \$4,4840	↓ \$1,932,626	↑ \$736	↑ \$386,878	↓ \$1,615,017
1025	Low Back Pain	1683	↓ \$803	↓ \$1,351,525	↑ \$767	↑ \$786,293	↓ \$60,470
1,168	Shoulder Injury	554	↓ \$701	↓ \$388,502	↑ \$907	↑ \$1,059,605	↑ \$114,084
<b>Combined impacts</b>			↓ \$3,672,655		↑ \$2,232,778		↓ \$1,561,404

<sup>1</sup> Direct medical costs reflect the combined impact of reduced episode numbers and reduced costs to treat each episode.

<sup>2</sup> Disability payments refer to indemnity payments of types TT/LM which are related to the duration of injured worker absence.

<sup>3</sup> 5 year change in total episode payments reflects impact of reductions in direct medical costs and episode number combined with the increase in average TT/LM indemnity payments.

### **Four-year annual Reductions in Medical Costs, Episode Numbers and Indemnity Payments of Type TT/LM in Studied Episodes, 2012 – 2016**

2016 Episode numbers	Episode Type	4 year reduction in episode numbers	4 year reduction in episode medical cost	Direct medical Cost change <sup>1</sup> (reduced episode numbers & cost)	4 year Increase in disability payments (TT/LM)	Increased Costs from disability <sup>2</sup>	4 year change in Total in payments on episode types <sup>3</sup>
732	Knee Arthroscopy	224	↓ \$4,094	↓ \$917,238	↑ \$1,271	↑ \$930,425	↓ \$632,518
1476	Low Back Pain	1232	↓ \$720	↓ \$887,979	↑ \$888	↑ \$1,311,965	↑ \$207,102
1482	Shoulder Injury	240	↓ \$682	↓ \$163,779	↑ \$1,054	↑ \$1,562,760	↑ \$89,299
<b>Combined impacts</b>			↓ \$1,968,998		↑ \$3,805,152		↓ \$336,116

<sup>1</sup> Direct medical costs reflect the combined impact of reduced episode numbers and reduced costs to treat each episode.

<sup>2</sup> Disability payments refer to indemnity payments of types TT/LM which are related to the duration of injured worker absence.

<sup>3</sup> 4 year change in total episode payments reflects impact of reductions in direct medical costs and episode number combined with the increase in average TT/LM indemnity payments.

The findings in this study are consistent with prior results from wide ranging, industry-specific and system-wide studies showing that back, knee, and shoulder injuries are among the most frequent and most expensive types of claims encountered in the workers' compensation system. Our data have also confirmed prior studies demonstrating that in the State of Ohio, injured worker claim management delivers results consistently above the national average in terms of delivering high-value care to injured workers. The data present here are consistent with recent reports from industry leaders and neighboring states demonstrating significant savings recently coming from reductions in total indemnity payments, reductions in billed services for high-cost diagnostic testing and reductions in total hospital and physician payments. This study adds to previous findings by demonstrating a specific reduction in the total costs of claims in 2012-2017 occurring through incremental reductions in number and costs of individual services rendered during the periods of care that previously incurred the greatest share of expense.

Collectively, these data indicate that the medical management of claims by private MCOs working in conjunction with BWC claims specialists has been overwhelmingly successful and that both the original and ongoing goals of the HPP are being met. Evidence in support of this conclusion is by the significant system wide improvements and the episodes-specific data examined over the past five years. Most importantly, quality of care was maintained or improved in all metrics monitored in this study even while total costs declined, indicating that savings are being achieved without compromising the delivery of care to Ohio's injured workers.

#### **Selected examples of system wide progress towards HPP goals:**

- A reduction in claims processing times: FROI timing reduced by 58 days, from 74 days in 1991 to 16.07 days in 2017.
- A reduction in injury incidence and severity.
- A reduction in total benefits paid of -\$361,690,801.00 since pre-HPP.

#### **Episode-specific data presented in this study:**

- 4-year changes: **Knee Arthroscopy:**
  - 4-year medical savings from reductions in cost and incidence for Knee Arthroscopy of \$917,238 coming from the combined effects of:
    - A \$4,094 average reduction in episode medical expense, and
    - An average of 224 fewer episodes annually.
  - 4-year increase in average per-episode payment of TT/LM indemnity for Knee Arthroscopy of \$1,271 likely due to the combined effects of increased duration of disability following injury and increased wage-based compensation rates state-wide.

- 4-year changes: **Low Back Pain**
  - 4-year medical savings from reductions in cost and incidence for Low Back Pain of \$887,979 coming from the combined effects of:
    - A \$720 average reduction in episode medical expense, and
    - An average of 1,232 fewer episodes annually.
  - 4-year increase in average per-episode payment of TT/LM indemnity for Low Back Pain of \$888 likely due to the combined effects of increased duration of disability following injury and increased wage-based compensation rates state-wide.
- 4-year changes: **Shoulder Injury:**
  - 4-year medical savings from reductions in cost and incidence for Shoulder Injury of \$163,779 coming from the combined effects of:
    - A \$682 average reduction in episode medical expense, and
    - An average of 240 fewer episodes annually.
  - 4-year increase in average per-episode payment of TT/LM indemnity for Shoulder Injury of \$1,054 likely due to the combined effects of increased duration of disability following injury and increased wage-based compensation rates state-wide.

**Reductions in cost do not compromise care quality:**

- Savings were achieved without negatively impacting the quality of care as they occurred simultaneously with continued improvement in measured episode quality metrics:
  - Rates of poor outcomes and repeat exacerbations have decreased over time.
  - Rates of opioid use have decreased dramatically.
  - Improved use of conservative care and decreased use of low-value/high cost services.
- Episode savings are a result of cost controls focused in the areas of greatest spend for an episode. Saves come from fewer services billed, rates per service

decreasing and spend reductions in physician and hospital bills. This indicates that savings originate from the work of multiple parties and are the product of:

- Improved utilization review
- Negotiated fee schedules and pharmacy formulary
- Changing provider behavior

## 7 EXECUTIVE SUMMARY

Containment of costs without compromising care, quality, appropriate RTW, or satisfaction is complicated and requires coordinated efforts of all parties to a claim. Throughout the time period the HPP has been in place, the cost of workers' compensation claims has increased nationally at a substantially faster pace than US healthcare costs.<sup>46</sup> However, our data have confirmed prior studies demonstrating that in the State of Ohio, injured worker claim management delivers results consistently above the national average in terms of delivering high-value care to injured workers.

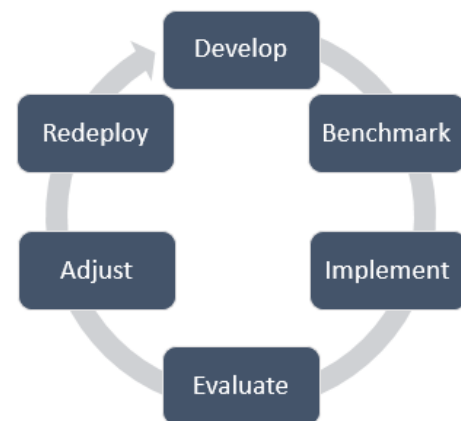
The data presented here are consistent with recent reports from industry leaders and neighboring states demonstrating significant savings coming from reductions in total indemnity payments, reductions in billed services for high-cost diagnostic testing and reductions in total hospital and physician payments. This study demonstrates a reduction in the total costs of claims in 2012-2017 occurring through incremental reductions in number and costs of individual services rendered during the periods of care that previously incurred the greatest share of expense. Most importantly this study also concludes, quality of care was maintained or improved in all metrics monitored while total costs declined. This indicates that savings are being achieved without compromising the delivery of care to Ohio's injured workers.

In order to continue to monitor the impacts that MCOs have had on the Ohio workers' compensation system, we recommend Ohio:

- Conduct a satisfaction survey of injured workers and employers once every one to two years to measure changes in satisfaction over time and ensure that satisfaction levels are maintained or improved. These surveys would be completed, and results reported shortly before open enrollment. We recommend two years cycles for this survey so that results can be reported alongside open enrollment. The purpose of these surveys would be to give an overall pulse of satisfaction with the managed care environment and with specific MCOs.

- Consider the development of episodes of care for high-risk conditions (high incidence, high risk for negative outcomes and/or high cost).

Performance analyses can be enhanced through the inclusion of quality measures that



*Lifecycle of development, use and continued optimization of quality-driven, patient-centered outcome measures.*

<sup>46</sup> "Medical Costs Trends: Then and Now."

focus on specific care-priorities to permit evaluation of cost without loss of focus on quality of care.

- Monitor Performance in quality measures and episodes can be communicated with MCOs, employers and injured workers to help drive competition and assist in MCO selection.
- Continue to use detailed analytics to support the development of benchmarking data sets for baseline evaluations and to set future goals to continue driving improved performance.



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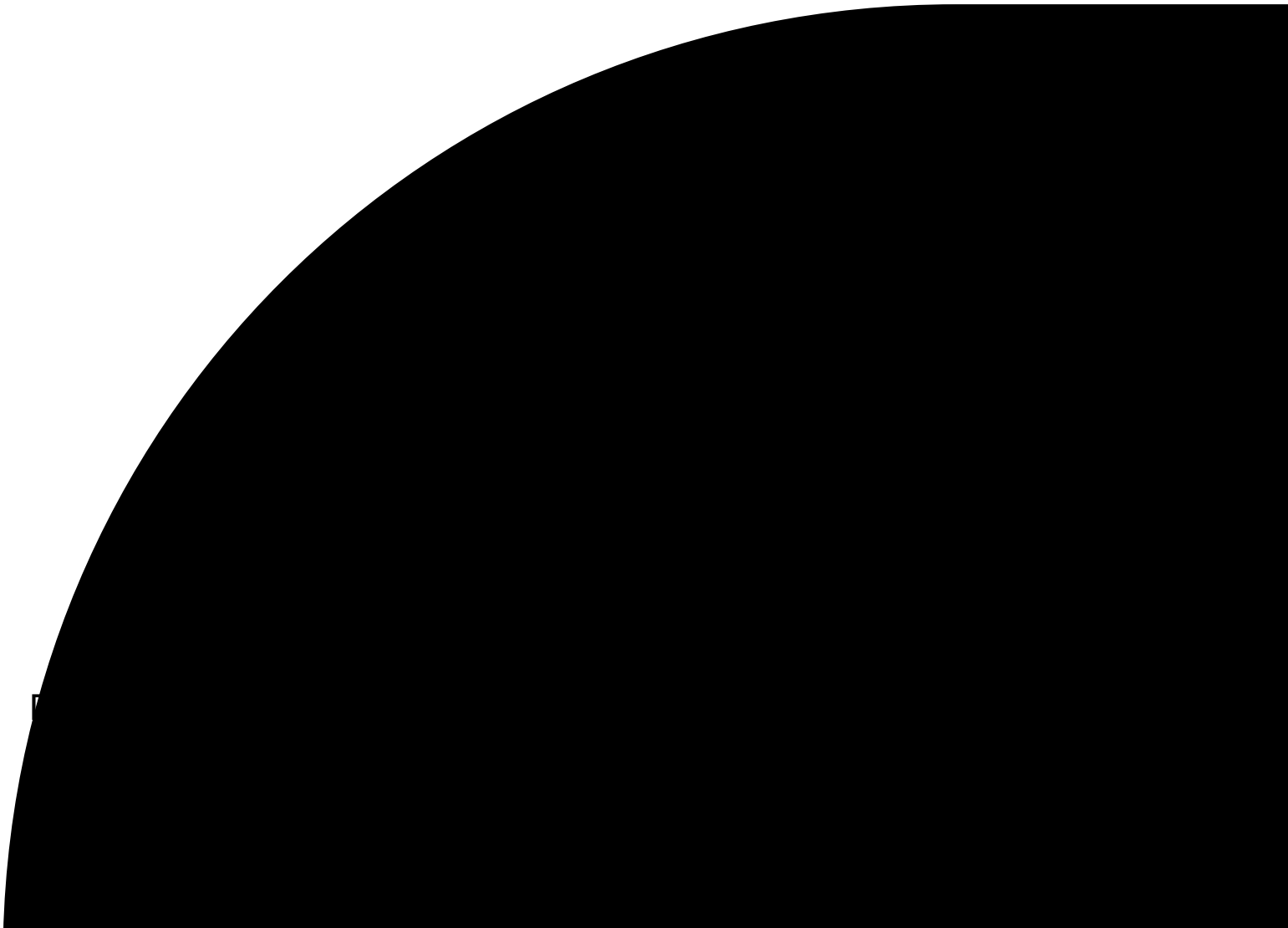
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# **Deliverable 2**

**DXC report for The Ohio Bureau of Workers' Compensation  
Managed Care Organization Impact Study**

**RFP DABWC-18-EP-002**

**12<sup>th</sup> December, 2018**



## **Deliverable 2: Report Identifying the Strengths and Weaknesses of the Current MCO Environment, with Recommendations on Opportunities to Further Enhance the System**

# 1 EXECUTIVE OVERVIEW

Medical management of workplace injuries in the state of Ohio falls under the authority of the Ohio Bureau of Workers' Compensation (BWC). The BWC has outsourced the responsibility for this medical management to private Managed Care Organizations (MCOs) as prescribed by the Health Partnership Program (HPP). The BWC oversees the medical management services of the MCOs as both organizations work to deliver high quality, well-coordinated medical care to injured workers. This report will provide evidence based upon review of aggregated data, document reviews, and survey feedback demonstrating that the introduction of managed care has had a positive effect on the delivery of care for the injured workers and employers in Ohio. While this analysis indicates that the current MCO environment is serving both Ohio's injured workers and employers well, this report will also seek to identify areas in which MCO medical management of care can continue to be optimized.

Ultimately, a solid strategic alignment exists between the BWC and MCOs. Both groups are working to help ensure prompt care and recovery for injured workers. Both parties work to mitigate the negative impacts of workplace injury on the employee and employer. The two parties play different roles throughout the course of a claim to achieve a shared goal: optimizing an injured worker's recovery and return to employment while protecting Ohio's employers from liability for unnecessary medical and indemnity costs.

The BWC is entrusted with the responsibility of administering and supporting the goals of the HPP, in part through ensuring the efficiency and efficacy of contracted MCOs<sup>1</sup>. To this end, the BWC has developed mechanisms such as audits, payment structures, and administrative expectations to verify that all MCOs are properly executing their duties and providing quality, cost-effective services to Ohio's injured workers.

In order to ensure the continued success of managed care in Ohio's workers' compensation system and to identify areas for growth and improvement, DXC Technology was contracted to conduct an independent, comprehensive analysis of the strengths and weaknesses of the MCO environment. This report corresponds to the request for proposal Deliverable 2:

Goals of deliverable 2 as stated in project RFP		
BWC RFP Exploratory Project Solicitation DABWC-18-EP-002	Deliverable 2 RFP pg. 16	<i>"A report identifying the strengths and weaknesses of the current MCO environment, with recommendations on opportunities to further enhance the system"</i>

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<sup>1</sup> ORC 4121.44.

In its entirety, this report is composed of five targeted deliverable reports evaluating the impacts of medical management services on specific aspects of the MCO environment, accompanied by an executive summary of findings and recommendations to enhance the system wherever possible.

This report will test two basic questions regarding the effect managed care has had on Ohio's workers' compensation system: 1) Does it bring value to the system, and 2) Does it present an opportunity for enhancement of the system? The results discussed in this report regarding managed care strengths and weaknesses are based on rigorous information gathering methods, including quantitative and qualitative data collection and analysis, review of historical data and documentation, and an evaluation of industry literature. In addition to the literature references cited throughout the text, the primary data sources for this report are as follows:

- BWC claims data (available for years 1997-2016; partial data for 2017 as available at the time of this report)
- Surveys of injured workers
- Surveys of employers
- Surveys of BWC claims-level operational staff
- Interviews with BWC senior-level staff
- Interviews with BWC Board of Directors
- Surveys of MCO claims-level operational staff
- Interviews with MCO executives
- Past contracts and contract appendices
- MCO policy reference guides
- MCO payments

It is important to note that the feedback collected in surveys and interviews are not presented as statements of fact but as information that represents key perceptions. It is beneficial to consider such feedback as valuable even if it is not corroborated with other data sources. Note that such data may present an opportunity for additional measurements or collaborative discussions with stakeholders.

## **MCO Environment**

As prescribed by the RFP, this deliverable is tasked with identifying the strengths and weaknesses of the MCO environment. The impacts of the MCO environment are spread far beyond the BWC and MCOs to employees, employers, and medical providers throughout the state. The MCO environment is the combination of participants and organizations that interact to get an injured worker safely back to work. This includes the efforts of both the BWC and MCOs: The MCOs execute medical management and cost containment, while the BWC oversees proper execution of these duties and integrates them with other elements of claims

management. This report investigates the strengths and weaknesses of the current MCO environment and provides recommendations to enhance the system.

## **Strengths and Weaknesses**

The overall strengths and weaknesses of the MCO environment can be organized into two key strengths and two key weaknesses.

### **Strengths**

The strengths existing in the current managed care system create the foundation for continuous improvement. The two overarching strengths are: 1) The public-private partnership enables an equal balance between injured worker and employer interests, and 2) The nature of the system vests a state agency the accountability for establishing benchmarks that facilitate efficient management of claims.

Public-Private Partnership: With the introduction of HPP-prescribed privatized managed care, BWC was able to utilize the relationship with MCOs to continually build and improve medical management services for the injured workers. Throughout interviews and collected survey data, MCO and BWC staff members at all levels perceived this to be true and believe there is unified support for delivering quality services to the injured worker.

This approach is an integral and fundamental strength of the current MCO environment. The working relationship between MCOs and the BWC brings to the table the combined interests of protecting the experience of injured workers and employers, using the state fund appropriately, and making processes more efficient based on the principles of market competition. These interests create a MCO environment that has the potential to provide the most effective service to workers' compensation stakeholders while also maximizing system efficiency. This strength can be leveraged for future organizational development and improvement.

Monopolistic System: Ohio's workers' compensation system is monopolistic due to BWC being the sole provider of benefits, medical payments, and claims decisions for work-related injuries or diseases. 50% of BWC senior staff members interviewed identified this as a key strength of the workers' compensation system. In alignment with legislation, BWC has the authority to enter into an agreement with MCOs to medically manage work related claims. BWC also has the authority to set benchmarks and expectations of MCOs based on desired managed care outcomes. This unique monopolistic system is shared by only three other states: North Dakota, Washington, and Wyoming.

## **Weaknesses**

Any weaknesses within the current MCO environment identified as a result of this study represent an opportunity for improvement as well as an opportunity for meaningful collaboration in problem solving and joint-positioning toward the future. Two opportunities most frequently revealed through interviews and policy review were: 1) The current degree of regulatory prescriptiveness, and 2) Communication between BWC and the MCOs.

Current Degree of Regulatory Prescriptiveness: A key element of a public-private partnership is utilizing the expertise of private industry to enhance the public processes. Excessive prescriptiveness from one partner dilutes and/or restricts the benefit from the other. In the interviews with MCO executives and BWC senior level staff, the topic of over-prescriptiveness was a common theme. Specifically cited was the degree to which the BWC stipulates specific MCO processes and activities through the MCO Policy Reference Guide (MPRG). Conversely, BWC staff cites that MCOs, when questioned on a practice, refer to the MPRG to back up their reasoning. As a result of both MCOs and BWC, respectively, using the MPRG as a means of supporting their argument in discrepancies, the MPRG has grown exponentially in size. Both parties agree that some level of MCO procedural expectations from the BWC is appropriate; however, both parties shared uncertainty about how prescriptive the BWC should be regarding medical management strategies and practices. This concern is important because it has the potential to produce extra regulatory oversight work for the BWC and stifle MCO innovation. Neither of those consequences are compatible with the concept of HPP, which encourages private industry expertise in delivering quality cost-effective care for Ohio injured workers.

This is not to say that there should be no regulatory prescriptiveness. Since Ohio's workers' compensation is a monopolistic system, the BWC has regulatory, administrative, and fiduciary authority and responsibility to require MCOs to perform specific activities and to meet specific expectations. This is also not to say that the current degree of regulatory over-prescriptiveness is solely the result of BWC actions. Rather, as was brought out in multiple interviews and survey responses, the level of prescriptiveness is also due in part to MCOs seeking "loopholes" in prescribed policy, requiring greater detail of expectations. It is this cyclical friction between MCOs and the BWC that has influenced the continued growth of the MPRG.

Communication: A second opportunity which was identified for potential improvement during interviews with both the BWC staff and MCOs was enhanced communication. Employees from both groups reported the perception of frequent communication break-downs. These perceived difficulties were mainly surrounding collection of documentation and contacts for claims. These difficulties are due in part to differences in computer systems, workload capacity,



and inconsistent interpretation or compliance with the stated delineation of responsibilities. Effective communication is important for efficient operations.

Communication between the MCOs and BWC happens on multiple levels. There is case management communication, policy communication, and interpersonal communication. These types of communication happen through different media, such as Electronic Data Interchange (EDI) data, case management notes, emails, trainings, and the MPRG. We found that the greatest weaknesses in communication happens in case management communication and interpersonal communication, as evidenced by instances of duplicative labor in case management activities and multiple reports of tension in interpersonal communication.

“I feel that communication is the piece that's the most frustrating right now. Both sides could do better.”  
- MCO executive

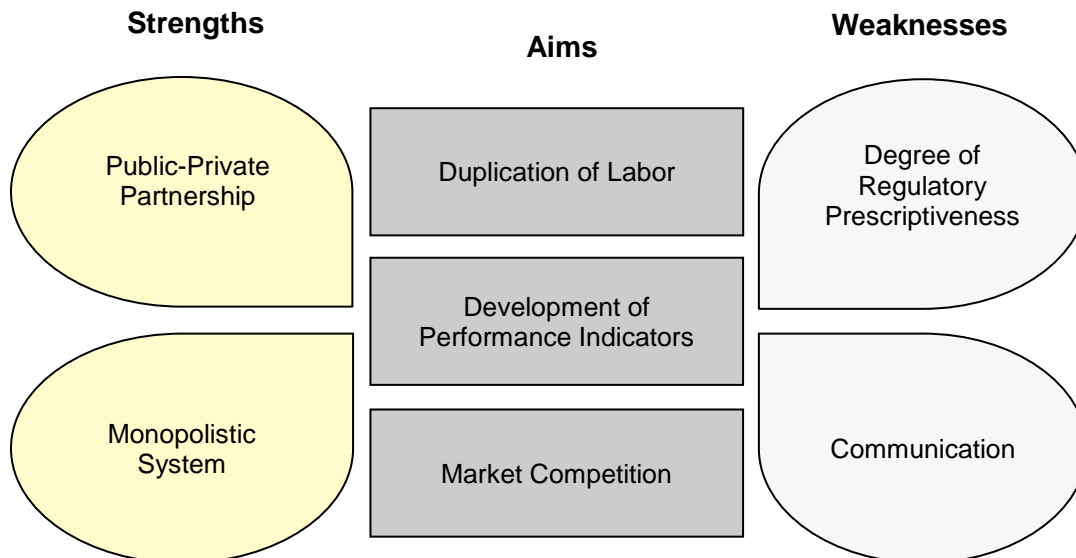
## Report Logic

The introduction of managed care was intended to incorporate and leverage the efficiency of private sector contracting, while retaining the strengths and reliability of the public sector. In order to appreciate the value of identifying the current managed care operational strengths and weaknesses, we must understand their relevance to the interests and activities of the BWC and MCOs. This report will explore how three specific programmatic areas encapsulate key systemic strengths and weaknesses and how they may impact the ability of the BWC and MCOs to meet the intended goals of the HPP, which include efficiently delivered medical management for Ohio injured workers. These three program areas, called aims, are as follows:

1. Duplication of Labor
2. Development of Performance Indicators
3. Examination of Market Competition

We chose these three areas because they serve as a barometer for interactions in a public-private partnership. They affect—either directly or indirectly—a large number of interested parties, including injured workers and Ohio employers. These areas have system-wide implications which require an effective work partnership between the BWC and MCOs. Additionally, all of the identified areas are linked by the fact that they have the potential to either positively or negatively impact the overall satisfaction and perceptions of the HPP, as well as the value that the injured workers and employers experience.

Each aim will give a brief overview of the scope of the work, background of the aim substance, relevant data and analysis, and appropriate recommendations. The outcome items for each aim are comprised of the subitems agreed upon in the scope of work, which are outlined in the analytic document, as well as any new areas of relevance identified by DXC researchers in the course of conducting the study. Additionally, each aim will show how the key strengths and weaknesses identified in this executive summary are operationalized in their respective programmatic area, as illustrated by the following figure:



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## 3 DELIVERABLE 2 OVERVIEW

### 3.1 Report Aims and Organization

The following report will address three targeted policy areas of the current MCO environment. We chose these three areas because they serve as a barometer for interactions in a public-private partnership. These areas focus on the impact of the effectiveness of managed care in the Ohio workers' compensation system. These programmatic focus areas were outlined and agreed upon in the Deliverable 2 analytic document and agreement form and are as follows:

Aim 1 – Duplication of Labor

Aim 2 – Development of Performance Indicators

Aim 3 – Market Competition

This report will provide findings from research conducted around these three program and policy areas along with summarized programmatic recommendations. The work product delivered in this report will address all items discussed in the scope of work, the Deliverable 2 analytic document, and associated agreement form, complemented with specific areas identified as impactful in the course of conducting the research for each for the three aims included in this report.

### 3.2 Abbreviations & Acronyms

Abbreviation	Definition
ADR	Alternative Dispute Resolution
BWC	Bureau of Workers' Compensation
CMS	Centers for Medicare and Medicaid Services
CSS	Claims Service Specialist
DoDM	Degree of Disability Measurement
EDI	Electronic Data Interchange
EPI	Exceptional Performance Indicator
FROI	First Report of Injury
HEDIS	Healthcare Effectiveness Data and Information Set

IC	Industrial Commission
IW	Injured Worker
LDW	Last Day Worked
MCO	Managed Care Organization
MoD	Measurement of Disability
MPRG	MCO Policy Reference Guide
NCCI	National Council on Compensation Insurance
ODG	Official Disability Guidelines
RTW	Return to Work
SOM	Service Office Manager
SOW	Statement of Work
TPA	Third-Party Administrator
URAC	Utilization Review Accreditation Commission

## 4 AIM 1: DUPLICATION OF LABOR

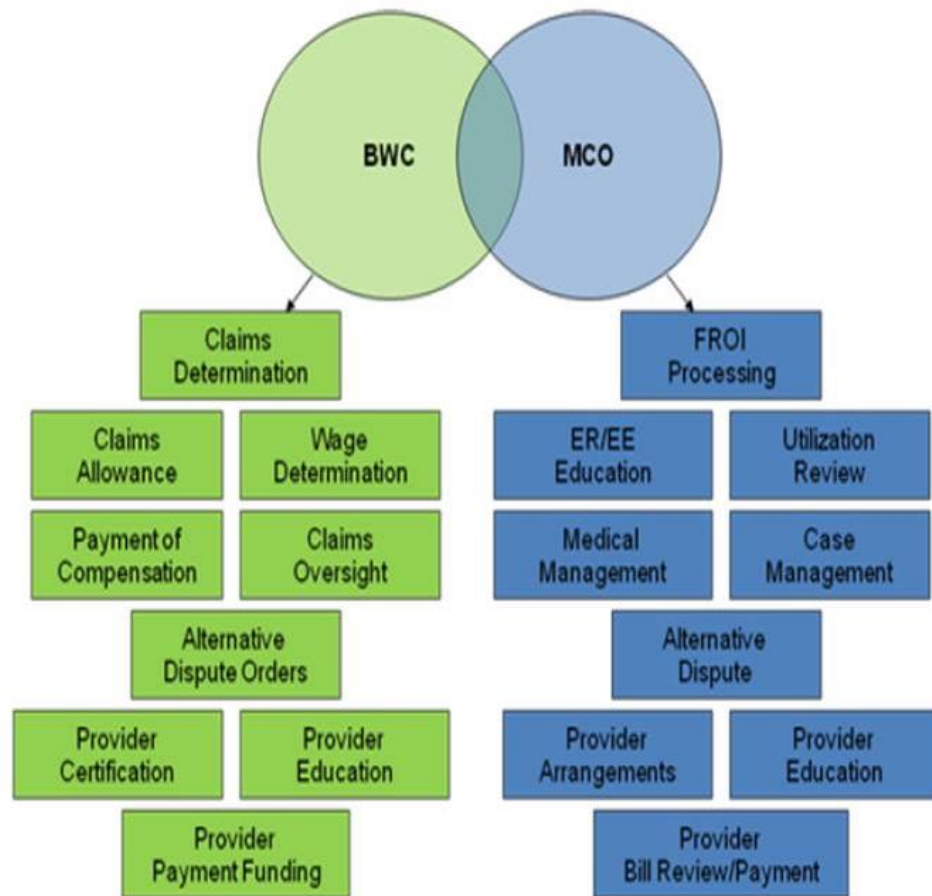
### Background

The Health Partnership Program (HPP) was designed in part to improve the medical claims management efficiency of the BWC and to ensure the delivery of high-quality and cost-effective care for Ohio's injured workers. Prior to introducing managed care, there were delivery inefficiencies. Operational audits showed long administrative delays in injury reporting (63 days) and provider payments (148 days). As a result of HPP legislation, BWC contracted with private Managed Care Organizations (MCOs) to perform the medical management processing of workers' compensation claims. The intent of this arrangement was to "accelerate the rate of performance improvements by leveraging the efficiency of the private sector," enabling State BWC employees to devote their experience and resources to non-medical management and other delegated responsibilities.<sup>2</sup>

Early documents, which guided the development of managed care, demonstrated the transition of medical claims management from the BWC to MCOs. The respective responsibilities of the BWC and MCOs have evolved over the past two decades into the present day, in which both groups work closely to ensure that injured workers are returned to the workforce as quickly and appropriately as possible. The introduction of managed care was intended to incorporate and leverage the efficiency of private sector contracting while retaining the strengths and reliability of the public sector. Operational inefficiencies are inconsistent with the HPP goals of streamlined performance making it important to continue periodic evaluations of the system for opportunities to further refine and strengthen the collaborative working environment without unnecessary overlap. As demonstrated with the following graph, there are naturally overlapping areas of shared responsibility.

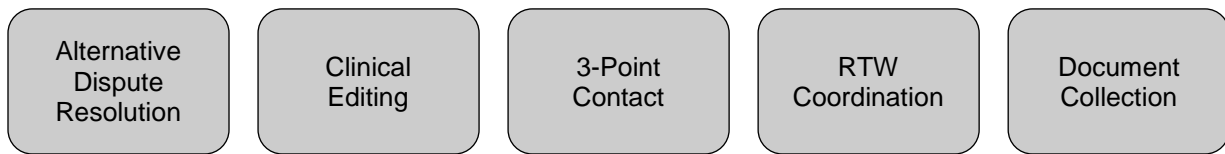
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<sup>2</sup> Harris, "Ohio Workers' Compensation Act, Analysis of 1993 HB 107."



**Identification of topics for evaluation:** For this report, areas with increased risk for operational redundancy were identified prospectively. Topics were selected based on the hypothesis that some functional roles may be more susceptible to inefficiency than others, specifically those exhibiting functional similarity or requiring extensive communication and informational transfer between multiple parties. In subsequent qualitative interviews and surveys, these and other areas were cited in responses as overlapping and possibly unnecessarily duplicative. Both MCO and BWC employees agreed in survey and interview responses that some operational areas contain unnecessary duplicated labor. Ultimately these exercises led to identification of several processes susceptible to functional overlap: alternative dispute resolution (ADR), clinical editing, three-point contact (Initial FROI contact), return to Work (RTW) coordination, and document collection.

### Duplication of Labor: Areas of Analysis



This section of the report will do the following:

1. Review the current MCO environment to examine if the system is maximizing the efficiencies the public-private partnership created by HPP was meant to deliver, or have unnecessary overlap of duties developed that may prevent system efficiencies.
2. Examine contributing factors and reasons for the unnecessary overlap of duties and identify any overlap that may inadvertently affect injured worker care or cost to the employer.
3. Recommend actions to eliminate such unnecessary duplication and/or overlap of duties, thus placing responsibility at the most efficient level.
4. Highlight other opportunities or practices with the potential to enhance efficiency and streamline collaborative efforts between BWC and MCOs.

## 4.1 Alternative Dispute Resolution (ADR)

Alternative Dispute Resolution (ADR) is a necessary legal process ensuring that both injured workers' and employers' rights are adequately protected. This process needs to work optimally or it will undermine the ability to have an engaged injured worker and employer to resolve the dispute in a timely fashion. MCOs are responsible for the medical management of work-related claims for BWC, and, as such, must have a formal ADR process in place for treatment decisions that are appealed by a party to the claim. Originally, if the dispute was not resolved the appeal was escalated to the BWC to ensure BWC guidelines were being met. Currently, the appeal is filed by the injured worker or employer to the Industrial Commission.

With the original ADR process, both the BWC and the MCOs were performing similar functions, thus creating a two-level process with the potential for delaying essential treatment decisions. During the ADR process, there was active communication between the injured worker, provider, employer, and the MCO/BWC representatives involved with the claim. Multiple copies of pertinent documentation were shared with the BWC in the form of claim notes and physician reports as faxed, scanned, or mailed document copies. The ADR process involved numerous notifications of decisions and status updates to claim parties followed by a specified time window in which a party may respond. The following steps were taken to improve the ADR process in 2009:

- Elimination of the second tier of ADR review in response to prior study results.



- Automatic delivery of digitized documentation copies to BWC.
- BWC removal of requirements for submission of redundant forms at stages preceding the ADR process, reducing duplicative document entry into the system where possible.

As stated earlier, a strength of HPP is the public-private partnership taken between BWC and MCOs. This new ADR process adds value to the system because it speeds up the process of dispute resolution.

In summary, while we found that there was some duplication of efforts in the ADR process prior to the 2009 update (particularly as an injured worker or employer appealed through the levels of ADR), the process is functioning as expected. We do not recommend making further changes to the ADR process based on our review.

## **4.2 Clinical Editing & Medical Bill Review**

Clinical editing is an automated review process by which billing data for services rendered is examined for accuracy and proper adherence to policies. Clinical editing software facilitates this process by using a defined library of codes designed to identify submitted bills for which payment should or should not be rendered. Automated data review and application of clinical edits is the front line of utilization review and arguably one of the most significant ways that MCOs can bring value to their provided services.

In theory, the process in place under the current BWC MCO contracts has the potential to be exemplary of the best a public-private partnership has to offer: permitting flexibility for these MCOs to utilize their expertise to effectively execute bill review, apply edits, and conduct data quality evaluation on behalf of the BWC. Contracts also specify that the process is subject to BWC review and oversight, permitting BWC to confirm positive MCO performance and verify compliance with contractual obligations. This section of the report will discuss the finding that MCOs are not currently maximizing their potential value to the system in this regard and will discuss opportunities for improvement.

Clinical editing software platforms examine bills using hundreds of thousands of codes, enabling automated evaluation of billed services and data for accuracy, completeness, and adherence to approved coding standards. MCOs are responsible for conducting this process of reviewing submitted billing data for accuracy, completeness, and consistency with BWC accepted procedures. BWC MCO contracts and Ohio Administrative Code require use of a nationally recognized clinical editing software for this purpose.

In order to permit BWC MCOs to leverage their industry expertise, contracts do not dictate any one software or specific library of clinical edits. Instead, BWC MCOs must use nationally recognized methods to review data for specific criteria. In general, these review criteria function to evaluate services for appropriateness and consistency with BWC accepted procedures and payment policies. For example, contracts state that BWC MCO software must have the ability to detect bills submitted with mutually exclusive procedures, but do not specify an exact mechanism by which MCOs must execute this function. Instead, BWC MCOs are able

to bring proprietary expertise to this process and determine the methods and details by which they apply the required review criteria.

MCO billing review and clinical editing is a critical point of control over data quality and accuracy and is the front line of MCO utilization review. The current arrangement provides an opportunity for BWC MCOs to greatly enhance the value of their provided services to the BWC and State employers, as medical bill and electronic data review is a complex and continuously evolving process. The ability of an MCO to adeptly navigate the process of clinical editing, maintain an up-to-date library of the tremendous number of codes, and utilize these skills on behalf of their clients is highly valuable. Efficiency in this arena is arguably one of the most valuable services an MCO can offer as it has the potential to positively or negatively impact nearly every transaction processed. Indeed, many organizations subcontract with private entities based upon their bill review and/or clinical editing expertise alone.

BWC MCOs have the opportunity to add great value in this arena as there exists a tremendous number of methods by which automated bill review can identify inaccuracies, inconsistencies, or inappropriate services. For example, the Centers for Medicare & Medicaid Services report over 500,000 potential combinations of clinical editing codes that can be used to detect procedures that should not be billed together. Even this set of codes is not exhaustive of every potential scenario and MCOs commonly build upon these publicly available code libraries to bring additional value to their medical management services, creating or subscribing to proprietary libraries with tens of thousands of additional codes designed to more thoroughly implement the requisite review criteria.<sup>3</sup>

Ohio BWC contracts provide this opportunity to MCOs, stating that compliance with national standards for clinical editing is the minimum acceptable criteria, but that MCOs may apply additional edits to enhance the required review and editing functionality. This is an important reflection of the HPP goals in action, leveraging the efficiency and flexibility of private industry, while retaining the consistency and reliability of the public sector. While clinical editing provides flexibility to BWC MCOs, it is a burden for providers because they are required to accept injured workers covered by any BWC MCO, but are only reimbursed based upon the specific clinical edits of each BWC MCO. It is possible that a provider would receive payment from one BWC MCO but not another for the same services. In balancing the interests of BWC MCOs with providers' expectations to be reimbursed fairly for a consistent set of services, BWC should consider standardizing the clinical and administrative edits across the MCOs. While MCOs may perceive this as overly prescriptive, the fact that legislation permits the injured worker to visit the provider of his choice creates an unintended conflict between the provider and the MCO. Reducing this friction allows the provider to deliver services that best fit the needs of each injured worker rather than the needs of each individual BWC MCO.

Due to the importance of this process, BWC MCO data review and clinical editing is subject to several types of review by the BWC, including regular evaluation of 837 EDI transaction data accuracy as well as ongoing informational monitoring for adequate review and

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<sup>3</sup> Weitnauer, "Claim Edits Libraries Are Not Created Equal."

accurate application of selected clinical edits. Two NCCI clinical edits A30 and A31 were previously identified as potentially impactful and have been monitored by the BWC informationally. Edit A30 detects billing situations in which services are billed for code combinations where one of the codes is a component of another, more comprehensive code billed. The other, A31, is triggered by bills containing code combinations in which one of the codes is considered to be either impossible or improbable to be performed in the same visit as the other code. At present, the results of such BWC monitoring demonstrate ongoing and repeated detection of scenarios in which BWC software identifies that these edits should have been applied but were not.

Data produced in an informational review seems to indicate that BWC MCOs are not maximizing their potential value to the system through application of thorough and complete rules for bill review and clinical edits. Discrepancies between MCO and BWC identification of basic, required edits may indicate that minimally acceptable criteria are not consistently being met, requiring continued monitoring by the BWC. Even minor billing review oversights by MCOs have the potential to produce significant financial impacts on the system. Although BWC and MCOs work to maintain the quality of data through requirements such as achieving over 98% accuracy in submitted 837 data, annual medical payments of over \$528,000,000 make even small errors potentially impactful, thus reinforcing the need for diligent review of potential issues.

The BWC conducts ongoing, automated review of MCO edits and data accuracy using an NCCI/CMS based software, but this process is limited and in no way intended to duplicate the MCO-delegated review. Rather it is designed to verify BWC MCO compliance with essential contract requirements and prevent improper payment. The responsibility for review of billing data, application of clinical edits, and appropriate decision making for BWC-allowable bill payment lies with the MCOs. The BWC's role is to verify that this process has been executed properly. Commercially available clinical editing software typically builds upon standardized libraries (such as the CMS/NCCI standard) with MCOs selecting and curating additional edits to augment review and bring value to their clients. This enables MCOs to meet and exceed the minimal requirements mandated by contracting governmental agencies. The billing data coming from MCOs to the BWC should contain few or no circumstances of discrepancies in applied edits or review requirements if the MCOs are meeting or exceeding contractual requirements in this regard.

The BWC procedures for oversight and validation of this process have been intentionally kept to a minimum in order to permit MCOs to bring value to the system while avoiding unnecessary duplication of MCO work. At present, the BWC regularly monitors six of the NCCI/CMS edits and 50 administrative review edits. The finding that BWC regularly identifies scenarios in which minimal review and editing requirements have not been met indicates that the editing process is either inconsistent or outdated. When the editing requirements have not been met, it is often due to the administrative review edits.

Although current contractual terms are intended to enable BWC MCOs to leverage resources and expertise, the absence of a unified core library of review logic and clinical edits creates difficulties for troubleshooting the origin of any suspected problems. The number of

code combinations for review and editing of billing data is so large that no single library contains all possible code combinations, making it theoretically possible (though unlikely) that MCOs are simply using different codes to implement BWC required review criteria. The reason this is unlikely is that, as previously stated, proprietary edit libraries typically incorporate existing, publicly available CMS/NCCI edits and build upon them to increase the value of bill review service.<sup>4</sup> Since the BWC is validating MCO-reviewed billing data using the CMS/NCCI edits that should already be incorporated into such proprietary edit libraries, the identification of failure to apply these edits is likely to indicate errors or failures in the MCO review process.

It is imperative that BWC MCOs accurately implement the review and editing criteria specified in their contracts. The existence of BWC MCO submitted data that appears not to have been subject to adequate evaluation is concerning and raises questions that the BWC and MCOs should work together to resolve.

The BWC should not repeat work that MCOs are contracted to complete. If MCOs are applying nationally recognized clinical editing software, the BWC should not be detecting repeated failures to apply publicly available, obligatory review requirements. Such findings bring into question the value of contracting the MCOs to provide this service, if the process is not conducted in an adequate and thorough manner and requires repetition by the BWC. Additionally, this issue may indicate a need for an increased regulatory prescriptiveness as opposed to continued flexibility granted to MCOs. In this instance, the flexibility afforded to MCOs may have two disadvantages: First, it is unclear whether MCOs have adequately embraced the opportunity to select and competitively leverage resources and expertise as intended. Secondly, the lack of mandatory, unified review logic and code libraries poses challenges for BWC to provide support to MCOs through investigation and troubleshooting, as the BWC may not have access to MCO-applied review logic.

In spite of the challenges, the MCOs have great potential value in this regard and, most likely, discrepancies can be resolved through transparency and communication, leaving the MCOs free to continue striving to exceed the requirements set forth in their contracts. In order to maximize the benefits of the public-private partnership model, the ultimate goal for both the BWC and MCOs should be for the MCOs to conduct this service in a manner that exceeds the minimum requirements and permits validation by BWC but necessitates minimal or no intervention from the BWC. To this end, we recommend that the MCOs conduct an evaluation and troubleshoot of BWC identified billing review problems in collaboration with the Bureau. While this path may temporarily require additional effort, the MCOs and BWC should work together to ensure that reviewed bills are complete, accurate, valid, and appropriate. Ultimately, the MCOs cannot demonstrate their true value and BWC cannot realize the full benefit of contracting medical management to private MCOs unless the bill review and clinical editing applied by MCOs is adequate.

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<sup>4</sup> Optum, *Optum Clinical Editing*.

Additional potential opportunities to strengthen the bill review process include the following:

1. In order to provide support to BWC MCOs as they troubleshoot the origin of identified discrepancies in review procedures, the BWC may need to increase their supervision over this process temporarily through the activation of a greater number of the available functionalities of the BWC software(s) currently used for review.
2. To emphasize the importance of optimizing the process, and incentivize BWC MCOs to utilize all available resources to provide the highest quality of clinical editing, the BWC could
  - a. Modify the process of imposing administrative setoffs for data inaccuracy by making the penalty proportionate to the dollar value instead of count of instances in which review would have resulted in inappropriate payment.
  - b. Or conversely, incentivize excellence in this area by creating rewards for obtaining exceptional results in completeness, accuracy, and validity of submitted bills.
3. BWC MCOs can seek to demonstrate their competitive strengths and reinforce the value of this public-private partnership through striving to exceed contractual requirements for minimum review criteria, data accuracy, and clinical editing capacity.
4. BWC MCOs can take the initiative to develop and propose new methods of review to augment those currently employed. They could work with the BWC or seek BWC support to continue to develop, test, and propose innovative review criteria to bring value to the MCO environment and to Ohio's employers. Successful demonstration of pilot results could be supported financially by the BWC through existing avenues such as development of specific performance incentives or MCO application for dedicated innovation funding.
5. Alternatively, the BWC could seek support from an outside vendor with expertise in this area and determine impacts, costs, and potential of using a standard set of clinical and administrative edits across all BWC MCOs.

### **4.3 Duplicative or Redundant Document & Information Gathering**

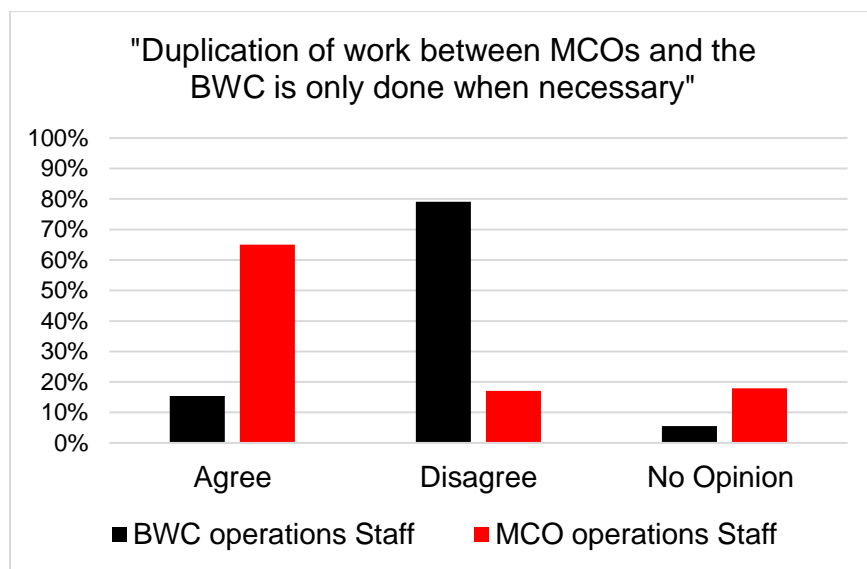
As part of identifying strengths and weaknesses of the current MCO environment, the most commented on area among both BWC staff and MCO staff during interviews was duplicate and/or redundant gathering of information. Submission of duplicate forms was cited by 33% of BWC employees as a major source of duplicative or inefficient work. BWC employee survey responses indicated that documents are repeatedly uploaded, resulting in as many as seven copies of the same scanned image. Duplicate documents must then subsequently be indexed and renamed manually by BWC employees. The forms are primarily medical documentation submitted by numerous parties to the claim and requires further MCO education of providers.

Due to the volume of these often duplicated forms, MCO employees responded that they perceived the BWC document scanning system to have a very long delay prior to documents

being made available for BWC viewing, resulting in BWC employees contacting MCOs, providers, or injured workers to obtain the documents again. This delay in the availability of documentation may exacerbate the problem. As a further complication, the information obtained may differ on two copies of the same form, necessitating further follow-up to identify which information was accurate.

HPP introduced private industry into the BWC system in the hopes of bringing system efficiencies that would benefit both the injured workers and the employers. A critical cornerstone of efficiency is eliminating duplicative efforts and more importantly ensuring the function is delivered at the most effective level, thus allowing more efficient use of resources. The question then becomes: At what level should medical management be performed by the MCOs to ensure it is delivered at the most cost-efficient, appropriate level? This question was an important part of the study, as was the effect managed care has had on the system. Have the proper efficiencies been identified and are the processes performed at the appropriate level?

As part of the qualitative research, we asked both MCO staff and BWC staff about their perceptions of current system efficiencies. The perception of unnecessary duplication appears to be higher among BWC staff than MCO staff.



This data shows that MCO employees are not as likely as BWC employees to say there is unnecessary duplication of labor between the BWC and MCOs. There may be several explanations for this result. It is possible that the MCO employees are not aware of the extent to which work is duplicated by BWC Claims Services Specialists (CSS), or that they are not aware of additional work required subsequent to the MCO's medical management. Finally, it is also possible that the survey results arise from the two employee groups having different understandings of what is "necessary" in their role versus what is the responsibility of the other entity. However, unnecessary duplication leads to system inefficiencies which is contrary to the

HPP goals of delivering efficient, cost-effective services to injured workers. Therefore it is important that both MCO and BWC employees are confident in the performance of their counterparts, so that they can collaborate effectively. Collaboration will permit targeted troubleshooting of weak areas and provide recognition of strengths. It will allow BWC employees to save time spent in unnecessary repetition of work and it will empower MCOs to identify their own strengths and weaknesses and to continue to refine and optimize their procedures, based on their own performance data results.

## 4.4 FROI 3-Point Contact

FROI 3-point contact is a functional area that overlaps out of necessity. Nevertheless, it was the most frequently cited area of duplicated labor by both MCO and BWC employees. 3-point contact is specific to the First Report of Injury (FROI) that must be filed with BWC. This process requires MCOs to make contact with the injured workers to obtain information about the injury, medical treatment, and injured worker. MCOs are also required to initiate contact with the employer to notify them, verify employee data, and communicate with the provider to identify and document treatment received. In the course of this work, MCOs may (but are not specifically required) to collect documentation to verify that the injury did indeed occur at the workplace.

This initial contact is very important. The BWC uses collected information to authorize the claim which allows case management to begin. Best practices say that case management of any claim should begin within the first 3 days of injury, so most state and private carriers require that initial contact and claim management begin within the first 24 to 72 hours after an injury. Early contact sets the foundation of claim management, initiates communication with all concerned parties, and provides direction for further investigation and case management.<sup>5</sup>

Of the 158 BWC staff who answered the open-ended question, "What are some examples of work that is duplicated between the BWC and MCOs?" 66 mentioned initial 3-point contact after receipt of claim. Of the 190 MCO staff who answered the open-ended question, "What are some examples of work that is duplicated between the BWC and your MCO?" 92 mentioned initial 3-point contact after receipt of claim. Both groups stated that repeated calls to parties to a claim result in unnecessary document duplication.

Specifically, BWC employee responses indicated that MCO employee notes taken during the 3-point contact were often absent or lacked sufficient information, necessitating additional contact calls. MCO employee responses on this topic indicated that the BWC CSSs often did not read MCO provided notes, repeated calls and questions, and entered nearly identical notes, or did not allow sufficient time to elapse in order to permit MCO employees to first collect required information prior to reaching out to claim parties.

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<sup>5</sup> McCoy, "Workers' Compensation Claims Management Best Practices."

To evaluate whether the overlap is necessary, it is important to understand the environment and expectations each party navigates. A goal of managed care was to improve FROI timing, which has been accomplished. As part of that goal, MCOs are contractually obligated to complete the FROI process within 3 days for  $\geq 70\%$  of claims and to complete 100% within 5 days. Timing is crucial for prompt determination of the allowance of the claim and commencement of medical management services. Initial contact with the injured worker, provider, and employer is usually within the first day, and then MCO staff uses the additional time to gather more complete information.

While FROI timing has improved dramatically, surveys revealed that both injured workers and employers had some frustration with being asked the same questions more than once. While the overlap is frustrating to both BWC and MCO staff as well as for injured workers and employers, it also provides a certain amount of checks and balances for the information gathered. Gathering all the correct and crucial information in a timely manner will benefit both the injured worker and the employer by eliminating errors. While improved communication and better adherence to workflows may reduce overall duplication of effort, in order to meet the needs of injured workers and employers in a timely fashion, there remains a need for urgency which may result in some duplication of effort.

In summary, while there may be operational overlap in FROI processing, enforcing best-practice deadlines has led to improved FROI timing. This has had a significant positive impact on injured workers trying to navigate the workers' compensation system. We recommend continued reinforcement of the existing work flow protocol between BWC and MCOs.

## **4.5 RTW Coordination**

Timely coordination of an injured worker's return to the workforce is one of the primary activities under the purview of the BWC and one of the principal duties assigned to contracted MCOs. A timely return to work reduces loss of self-esteem, depression, secondary symptoms, and/or a lifestyle change. Feedback from MCO and BWC employees involved in RTW coordination shared many similar characteristics with feedback received in regards to the 3-point FROI contact discussed above.

Coordination of return to work can be a labor-intensive job that often entails repeated and ongoing communication with parties to the claim. Necessary contacts frequently include multiple medical providers, the employer, and the injured worker. Management of RTW is complex and often requires that claims managers employ a diverse set of skills to integrate information from many sources and utilize available resources in an innovative way to help injured workers get back to the workforce safely. Success in this arena is immensely valuable and minimizes the consequences of what often is a major disruption for both the worker and the employer. MCO responsibilities include reaching out to providers and employers both



proactively and in response to injury to educate them on available resources, proper documentation policies, and procedures surrounding RTW coordination.<sup>6</sup>

A goal of HPP was to improve effective case management of work-related injuries with the objective of facilitating a safe and sustainable return to work. Both BWC staff and MCO staff are involved in the process, however they often overlap or feel the other falls short of expectations. When surveyed, BWC employee responses included CSS concerns about frequently encountering inadequate notes by MCO employees and MCO employee failure to enter RTW updates or accurate working dates into the claims tracking system. MCO employee responses indicated that they often see that BWC employees have contacted parties to a claim to collect information that they have already entered into the system. MCO respondents further expressed a belief that claim notes are often not read by BWC employees or that information provided by MCOs to BWC is unfairly treated by BWC staff as incomplete or inaccurate.

A part of the MCO performance payment is dependent on prompt and appropriate RTW, and MCO staff recognizes the importance of initiating transitional work and other return to work strategies. They also recognize the importance of properly entering documentation such as RTW dates. BWC staff is equally dedicated to working with the injured worker and the employer to accomplish the same goal. In summary, return to work coordination will continue to have a degree of duplication of labor and is necessary for each party to fulfill their respective responsibilities.

## 4.6 Summary of Aim 1

The information collected in this study has indicated that the workers' compensation system has benefited from numerous systemic evaluations and strategic revisions over the past two decades. This indicates an effort by the entities within the MCO environment to continuously evaluate and improve operational efficiency. This effort has been beneficial on two levels: First, it helps achieve an intended HPP goal of added efficiencies; and second, employees have taken note of the benefits of such applied revisions, as indicated in various qualitative interviews and surveys. Aside from various improvements to individual processes, the introduction of managed care has demonstrated valid improvements to the workers' compensation system. Reporting of the First Report of Injury (FROI) has decreased from 63 days to under 16 business days and provider bill timing has decreased from 148 days in 1993 to 3.6 days in 2018<sup>7</sup>. In qualitative surveys, both injured workers and employers expressed an overall satisfaction with the system. Despite the fact that there are ongoing opportunities for improvement, our study concludes that none of these are an impediment to meeting the needs of injured workers.

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<sup>6</sup> "BWC Medical Guide."

<sup>7</sup> Harris, "Ohio Workers' Compensation Act, Analysis of 1993 HB 107."

When HPP was created in 1997, the concept of how MCO staff and BWC staff would work together and share responsibility for management of work related claims was in its infancy. As the two parties began working together and sharing knowledge unique to each environment, efficiencies and division of responsibilities developed. Having said that, it was important to look at the essential processes where both BWC staff and MCO staff stated that during the qualitative interviews, there still remained a perception of unnecessary duplication of efforts, possibly making managed care less efficient than intended.

Analysis of four functions identified as duplicative and/or inefficient: ADR, Three-point FROI Contact, Return to Work and Clinical Editing found that measures have already been taken to streamline the processes where necessary.

- ADR –The original two-tier ADR process has been updated into a single tier with the BWC submitting the dispute on behalf of the MCO performing the function. As a results of this consolidation, other process efficiencies were included.
- Three-Point Contact and RTW - FROI three–point contact and return to work coordination will continue to have a degree of duplication of labor and is necessary for each party to fulfill their respective responsibilities. Ensuring accurate information improves services provided for the injured worker and ensures Ohio employers that the injury was a work-place injury and the injured worker is an employee. However, based upon MCO and BWC staff interviews, there is still room for better adherence to workflows to minimize any unnecessary duplication.
- Clinical Editing - Clinical Editing is a necessary part of any managed care system to ensure proper provider fee bill payment. The current managed care system is not intended to have a two-step process but indicates that the MCO medical bill review and clinical editing requires continued monitoring by BWC and troubleshooting by MCOs. MCOs should take advantage of the opportunity afforded by this flexibility to adopt market strategies and leverage competitive and innovative methods in order to meet and exceed expectations. Additionally, the BWC could seek support from an outside vendor with expertise in this area and determine impacts, costs and potential of using a standard set of clinical and administrative edits across all BWC MCOs.

### **Opportunities**

A number of steps have already been taken in identifying and resolving areas that may represent an unnecessary duplication of labor. However, from interviews with both BWC and MCO staff, there still exists a perceived unnecessary overlap that could be improved with communication and a delineation of workflows. This is an opportunity to re-evaluate the level of accountability for compliance and expedite information gathering:

1. BWC, in conjunction with MCOs, conducts an analysis of the workflow and division of labor between BWC and MCO staff in the areas of FROI three-point contact and RTW documentation.
2. Ensure that both MCO and BWC staff are consistently adhering to best practices for document collection.
3. Continue the enhancements currently underway to improve the claims document imaging processes.
4. MCO should leverage expertise to compete in terms of tools and methods used to conduct accurate and thorough medical bill review. Such capacity should be viewed as a competitive strength and opportunity to bring value to employers and the State.

## 5 AIM 2: DEVELOPMENT OF PERFORMANCE INDICATORS

With the creation of HPP, medical claims management services were outsourced to private Managed Care Organizations (MCOs). With that outsourcing, BWC shifted from an operations role in medical claims management, to a management role with additional oversight responsibilities. The intent of HPP was to ensure the delivery of quality, cost-effective care for Ohio injured workers through an effective medical management system, resulting in improved responses to injured workers and providers. BWC was to manage and monitor the performance of MCOs. To accomplish this, performance indicators were developed to financially incentivize MCOs to meet specific, measurable goals and achieve the desired outcomes of HPP.

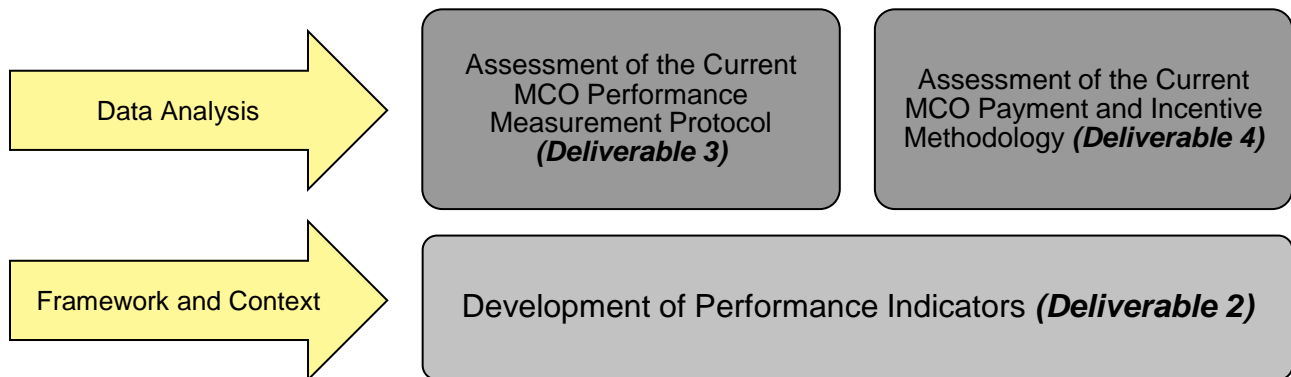
Payment for basic process-based services, such as FROI processing and provider fee bill processing, are a necessary part of a reimbursement methodology. However, effective medical management focuses on returning the injured worker to work as quickly and safely as possible. This is outcome-based as compared to process-based and is measured differently. The introduction of outcome-based payments started to emerge in 1999 with the addition of the Degree of Disability Management (DoDM) measurement, and has continued to evolve and improve throughout the current contract.

This deliverable aim will explore in detail how these indicators were conceived and implemented. This aim will also provide the contextual groundwork for evaluation of the success of performance indicators based on their quantifiable outcomes for Deliverable 3: Assessment of the Current MCO Performance Measurement Protocol, and Deliverable 4: Assessment of the Current MCO Payment and Incentive Methodology. Collectively, this report and the findings of Deliverables 3 and 4 will enable the evaluation of progress made by the BWC and MCOs toward the goal of making the workers' compensation system more efficient and effective for injured workers and employers through achieving HPP goals. Specifically, this aim will provide analysis of two key topics:

1. The degree to which current performance based payment methodologies are achieving the desired results of improved efficiencies and effective case management.
2. The evolution of performance indicators in the MCO environment.

Based on the results of these analyses, we will provide recommendations for possible strategies to aid in the execution of future development and use of performance indicators with the goal of increasing success and avoiding negative effects to stakeholders. Ultimately, this aim will provide the framework for further quantitative analysis in Deliverables 3 and 4. While performance indicator development and associated payment methods should ultimately be determined by data, a clear understanding of how indicators have evolved and how they have affected and been affected by their environment—both locally in Ohio as well as industry-wide—

is necessary for successfully negotiating and implementing future indicators. In short, this aim provides the groundwork for further understanding and contextualizing indicator analysis results presented in upcoming Deliverable reports.



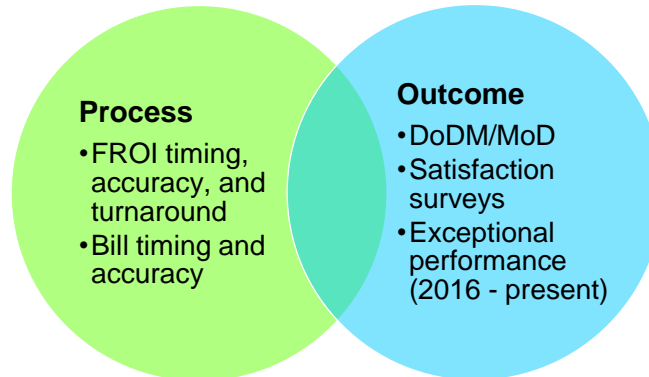
The analyses in Deliverables 3 and 4 will reveal a comprehensive, objective picture of the effects of performance indicators on MCO medical management. It will allow us to determine which indicators have effectively aided in meeting the managed care goals. It will also allow us to see what benchmark values have and have not been adequate in encouraging MCO performance.

## 5.1 Performance Indicator Benchmark Origins and Value Determination

Performance indicators have historically been connected with specific benchmarks and payment amounts. Using the available data and a contextual understanding of the logic behind indicator inclusion, we can evaluate the effectiveness of performance indicators to aid in the development of future indicators.

### 5.1.1 Process and Outcome Indicators

*Examples of process and outcome indicators*



As mentioned in the introduction of this aim, the value of each indicator has been determined based on its usefulness in either increasing process efficiency or outcome effectiveness. While these two concepts are not mutually exclusive, they do represent an important delineation as reflected by industry literature.<sup>8</sup>

One of the most salient factors in indicator development has been a perceived need for greater efficiency in the workers' compensation system without sacrificing quality. In this sense, these performance indicators focus on the processes of the system. While not considered a measurement of outcomes, the process indirectly affects medical management and the goal of returning the injured worker to work. Process indicators have historically been important tools for the BWC when efficiency has been a primary goal. For example, before managed care, FROI timing was, on average, over 60 days. This timing revealed an important process: *inefficiency*. As a result, one of the first performance indicators in MCO contracts measured MCOs' ability to manage more efficient FROI timing. Both BWC and MCOs agree that prompt reporting of the injury directly affects case management and the injured workers' ability to return to work.

According to a 2015 workers' compensation benchmark study, industry executives are increasingly discovering that improvement in industry success is directly tied to a focus on outcome-based rather than process-based performance.<sup>9</sup> The report argues that "to move from principally process-focused measures to operationalizing outcome-based measures, organizations should begin with the end in mind and reverse engineer performance measures to identify what claim activities have the greatest impact on the desired outcome."<sup>10</sup> The report

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<sup>8</sup> Algire, D. Z. 2015. "2015 Workers' Compensation Benchmarking Study: Claims Management Operational Study." Rising Medical Solutions.

<sup>9</sup> Ibid.

<sup>10</sup> Ibid., p. 3

goes on to posit that creating outcome-based measures requires more than simply identifying the outcome desired. Rather, it requires a process of unpacking the desired outcome to reveal what activities are directly tied to that outcome. Doing so necessitates a systematic, methodical analysis of the specific activities that are most closely correlated with successful outcomes. While Deliverable 3 (assessment of the current MCO performance measurement protocol) will provide a detailed quantitative analysis of the connection between activities and outcomes, the current report will seek to examine the “unpacking” process and identify whether the association of activities with outcomes has been adequately represented in the previously selected performance measurements, recognizing that any successful outcome relies on successful processes to reach that outcome.

One of the key strengths of the current managed care system is the availability of extensive data. Having such a wealth of information allows for evidence-driven identification of meaningful performance indicators through a rigorous analysis of the activities that drive desired outcomes. For example, using national measures, such as HEDIS (Healthcare Effectiveness Data and Information Set), would allow BWC to benchmark their MCOs against each other and other markets. California Medi-Cal uses this strategy by publishing their HEDIS performance on an annual basis which includes comparisons to national Medicaid and Commercial averages. One specific measure that would be applicable to BWC would be the use of imaging studies for low back pain.

## **Key Strengths and Weaknesses**

*Strengths:* Given that the BWC and MCOs share goals in optimizing return to work, both have an interest in identifying outcomes that are evidence-based and tied to specific medical management activities. Additionally, the existence of a monopolistic system means there is comparable data across all MCOs as they have all been held to the same performance and outcome measurements.

*Weaknesses:* Communication can be improved by more clearly defining the desired outcomes of MCO medical management and by collaborating on concrete ways to ensure that process-based indicators are relevant for delivering successful outcomes.

### **5.1.2 Origin of DoDM/MoD**

Of the performance indicators used both currently and in the past, the DoDM and MoD scores are the most significant in terms of measure weight and associated payment amount. This reflects the fact that the types of activities measured by MoD and DoDM have been intentionally identified as being effective for the key goal of HPP: stable return to work for injured workers. First introduced in 1999, the DoDM score was intended to provide objective feedback to MCOs and the BWC on the ability of MCOs to meet acceptable standards for days absent.

The introduction of the MoD score also brought in recent medical as a metric, in addition to days absent. MCOs have received DoDM/MoD associated quarterly payments based on their ability to meet targeted scores.

MoD has been praised by industry experts for its sophistication and relevance in determining appropriate duration of disability in Ohio.<sup>11</sup> It incorporates a multi-variable analysis and decile-based benchmarks in order to provide a robust measure of MCOs' ability to provide effective medical management for injured workers.

DoDM originally measured only days absent as determined by the number of days between Last Day Worked (LDW) and Release to Work. MoD, in addition to using updated claim data, changed the days absent calculation to the number of days between LDW and actual RTW. Additionally, the inclusion of recent medical in the scoring system provides a proxy indicator for utilization, encouraging MCOs to closely align authorized treatment and medical services with the appropriately developed care plan. MoD improved upon DoDM by going beyond just days absent to offer a broader look at case management and by updating the data from which expected days absent are calculated.

In 2009 (while the BWC was still using DoDM), Deloitte Consulting conducted a comprehensive study on Ohio's workers' compensation system.<sup>12</sup> They recommended that BWC update DoDM benchmarks based on ODG (Official Disability Guidelines) in order to determine appropriate disability duration. Their argument was that the medical data used in DoDM scoring was outdated and ODG offered more recent data. MoD was developed and introduced into the MCO 2011-2012 contract, which measures effective medical management, a goal of HPP. BWC developed a methodology to measure the outcomes that more accurately reflected Ohio-specific data. In 2015, the scoring methodology was changed to continuous scoring, to better reflect return to work values.

## **MCO Feedback on MoD**

From interviews and surveys with MCO executive level and operational staff, we were able to outline some key points of MCO feedback on the MoD score. Understanding how MCOs perceive MoD and its implications is imperative for embarking on future indicator collaboration and getting buy-in on future MoD changes. This section will outline the underlying themes in MoD score feedback from MCOs.

The following are observations based on interview and survey data:

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<sup>11</sup> Haas, A. 2016. "Harnessing data to measure duration of disability."  
<https://ohiobwcblog.wordpress.com/tag/measure-of-disability/>

<sup>12</sup> Deloitte Consulting, 2009. "Ohio Bureau of Workers' Compensation Comprehensive Study." Report 2.6.



- MCOs with relatively high MoD scores were less likely than MCOs with relatively low MoD scores to provide feedback on MoD.
- In the survey of MCO operational staff, 37.61% agreed or strongly agreed that the MoD score is a good way of measuring MCO performance. 38.6% disagreed or strongly disagreed, while 23.79% had no opinion.
- In the survey of MCO operational staff, 19.41% disagreed or strongly disagreed that the current method of paying MCOs for performance is appropriate. The following is a selection of responses from this group:
  - 13.95% of respondents report that the process of calculating the MoD score can be confusing due to its complexity.
  - 8.52% of respondents report that the data used in MoD calculations may be out of date.
  - 27.91% of respondents report that the MoD score does not capture the complexity of individual cases and may not take into account anomalous circumstances.
  - 47.29% of respondents report that certain aspects of case and medical management which are outside the direct control of MCOs are included in the MoD score.

Being able to understand and speak to these concerns will directly aid in improving communication between the BWC and MCOs. Having a mutual working understanding of the MoD score is a necessary foundation for future indicator development. Notwithstanding the initial complexity of MoD, MCOs are adjusting to the new performance indicators and the focus is directed to sustainable return to work.

## **Key Strengths and Weaknesses**

Strengths: The DoDM measurement for performance was outdated and narrowly focused. Performance measurement was greatly enhanced by changing the case management measure from DoDM to MoD. This indicator not only incorporates additional factors, but it is based on Ohio-specific data, and looks at sustainable RTW rather than simply release to work. This makes it a stronger measure of the effectiveness of MCO medical management strategies.

Weaknesses: The weakness lies in the MCO understanding of MoD. Both communication and outcomes can be improved by working with MCOs to educate them on how the MoD score is calculated and collaborating with them to identify any potential areas for improvement. Additionally, MCOs should actively improve internal training to increase their understanding of MoD scoring methodology.

### Opportunities

The value of using MoD as a determinate of MCO performance is that it provides insight into sustainable return to work and is based upon Ohio historical data. However, from the MCO survey and interview results, it appears there is a basic lack of understanding as to process of calculating the individual MoD scores, despite quarterly MoD workgroup meetings. To maximize performance, it is important both parties have a clear understanding of this metric. To achieve this, we recommend the following:

1. Evaluate past methods of MoD education and implement new methods. Survey and interview data reveal that many MCO staff members do not understand MoD. New methods for MoD score education could include an interactive web module which MCO staff could access on their own and work at their own pace to understand the complexity of MoD scoring. Pre- and post-education surveys can be used to measure the effectiveness of such a method.
2. Assemble a working group to determine relevance of current RTW benchmark data. Contemporary medical data is crucial for accuracy in MoD scoring as it prescribes the appropriate amount of time an injured worker should be absent from work. The current medical data for MoD scoring is from 2007-2009. The BWC is currently undertaking a project to update MoD with current claim and RTW data. We recommend that BWC evaluate the need to refresh the data used for MoD scoring on an annual basis.
3. Reassemble a working group of MCO and BWC staff to identify and evaluate *specific* examples of anomalous cases and variables outside of an MCO's direct control. Doing so will provide data to show the degree to which such instances impact MoD scores. If a significant connection is found between an anomalous case or an uncontrollable variable and the MoD score, further work can be done to modify scoring protocol to control for such instances. If no significant connection is found, then no changes need to be made to the scoring process. In either case, the BWC is collaborating with MCOs to arrive at data-driven conclusions. This exercise can help bolster an environment of collaboration and a mutual focus on data-driven decision making between the BWC and MCOs.

## 5.2 Negotiation process related to performance indicators and their reflection of an iterative improvement process

MCOs and the BWC negotiate terms of any financially incentivized performance indicators prior to each new contract cycle. The BWC has historically sought MCO feedback and concerns in the course of contract preparation. Although unusual in the models of public-private partnerships that use other procurement strategies, such as RFPs, this strategy provides a unique opportunity for using negotiation strategies that increase the likelihood of developing a contract that optimally preserves the interests of both parties.

According to interviews with individuals involved in past contract negotiations, discussion has often been perceived as contentious and unproductive. This is likely to be both a product of, and contributor to, the systemic weakness of poor communication between the BWC and MCOs. In interviews with MCO executives and BWC senior-level staff, the following themes surrounding contention during negotiation were uncovered:

<b>MCO Executive Staff Themes</b>	<b>BWC Senior-Level Staff Themes</b>
Perceived lack of business acumen in governmental agencies.	Mistrust of profit-driven models used by private healthcare companies.
Inconsistent or unpredictable business model. MCO interviewees interpreted BWC relationship to vary between MCO as a “vendor” or “partner” when advantageous to BWC.	Inconsistent or unpredictable business model. BWC interviewees interpreted MCO self-identified relationship to vary between MCO as a “vendor” or “partner” when advantageous to MCO.
Too much regulatory oversight	Ever-changing requirements for regulatory oversight due to MCOs seeking “loopholes.”
Focus on positions rather than outcomes.	
“Other side” not seeing the bigger picture.	
Negotiation has defined duration and ends when parties are out of time, not when mutually acceptable agreements are reached.	

An iterative improvement process of performance indicators would reflect the interests of both the BWC and MCOs through negotiation processes. A key mistake which has a high likelihood of being made during negotiations is assuming that MCO interests and BWC interests

are fundamentally incompatible. Rather, successful negotiations must operate on the assumption that possible agreement exists and that the interests can be met.

While the history of contract negotiations has been fraught with tension, as evidenced by extensive feedback and anecdotes shared both by BWC administrative staff and MCO executive staff, there is no evidence that this has negatively affected the system. In fact, no MCO has left the system due to negotiations.

Negotiation of performance indicators has important implications for injured workers and employers in Ohio. By agreeing on indicators, the BWC and MCOs are essentially agreeing on the workers' compensation outcomes and goals considered most important to achieve. This is especially true for negotiating the importance of outcome indicators such as MoD's scoring method for RTW outcomes. Additionally, these performance indicators ultimately determine the activities performed by MCOs effective of good medical management as prescribed by the HPP. For these reasons, it is imperative that all performance indicator negotiation is done with the injured worker, employer, and HPP goals and objectives in mind.

### **Opportunities**

Negotiations of contractual performance indicators has been historically tense. In order to enhance the negotiation process, the BWC could contract with a professional negotiation mediator who could assist in the negotiation process to achieve the following:

1. Focus on the interests of injured workers and employers.
2. Utilize methods for a consensus building approach to negotiation.
3. Concentrate on an iterative review process that allows both BWC and MCOs to contribute to the development of key performance indicators that meet the objectives of the HPP.

## 6 AIM 3: MARKET COMPETITION

HPP created the public-private partnership with the outsourcing of claims medical management to MCOs. However, the employer was to have the freedom of choice in selecting the MCO, creating open market competition among the MCOs. The concept of the BWC contracting with multiple MCOs was to ensure competition within the marketplace. The question becomes: “How can open enrollment enhance competition without affecting the quality of care for injured workers?” The goal of aim 3 is to conduct an evaluation of the strengths and weaknesses of open enrollment and to recommend changes to the current process of employer selection of MCOs that are actionable in the operating environment of the BWC. Specifically, this aim will provide an analysis on the following three topic areas:

1. Evaluation of open enrollment processes.
2. Continuity of care during transfer to a new MCO.
3. Marketing disputes during open enrollment.

### 6.1 Evaluation of Open Enrollment Processes

To maximize the competitive environment, the BWC alerts employers of the Open Enrollment period in several ways so that they are prepared to select the MCO best suited to their needs.

1. The BWC sends out a post card to all employers enrolled in workers’ compensation about one week prior to the start of open enrollment, informing them of the dates for the open enrollment period.
2. The post card provides a link to the BWC webpage that contains the MCO report card and the MCO selection guide.
3. The BWC also posts a press release on its website with open enrollment dates and the process for an employer to follow should they wish to change MCOs.

Three groups were asked to provide their perspectives on the open enrollment process:

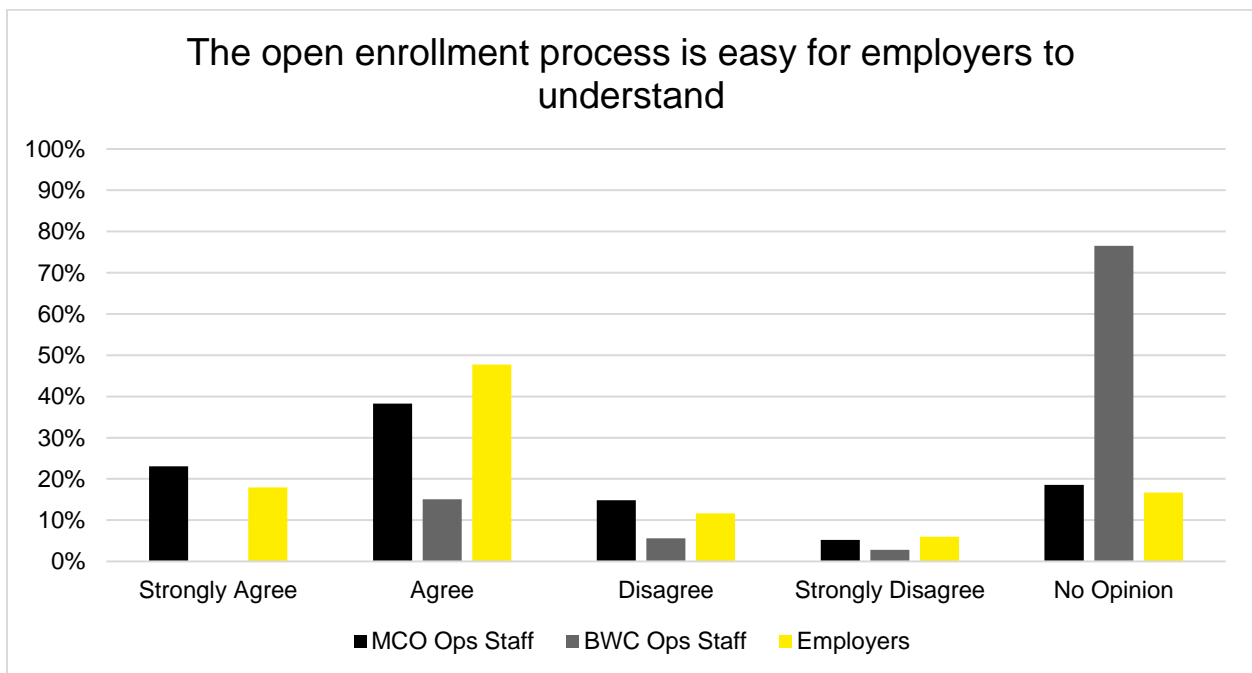
- Individuals affiliated with the BWC (Board of Directors, administrative staff, and operations staff).
- Individuals affiliated with an MCO (executives and operations staff).
- Employers.

These groups have the highest amount of exposure to the open enrollment process. In-depth interviews were conducted with the BWC Board of Directors, BWC administrative staff,

and the MCO executives. Online surveys were administered to BWC operations staff, MCO operations staff, and employers.

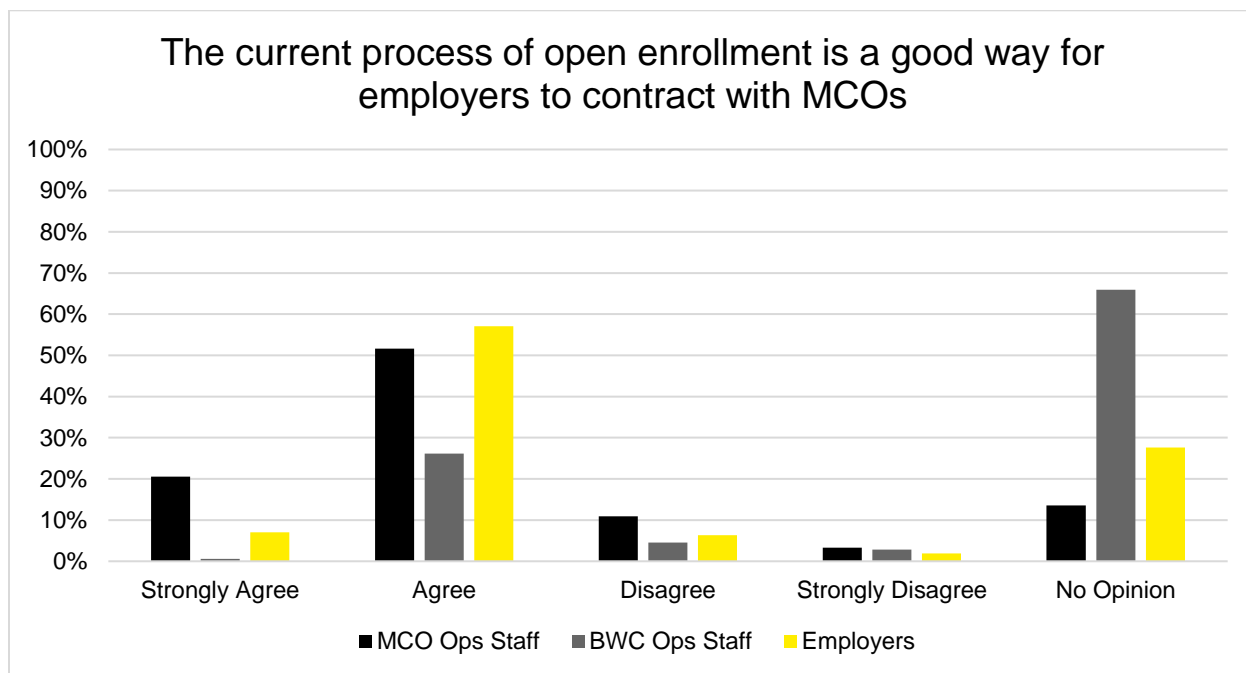
The following two charts display survey feedback on the open enrollment process. The first chart compares survey responses between the three surveyed groups on their agreement with the following statement: “The open enrollment process is easy to understand.” The number of survey respondents that provided an answer to this question is as follows: BWC operations staff - 181, MCO operations staff - 728, and employers – 1,473.

The Open Enrollment period is designed to give Ohio employers choice in MCO selection, and should be straight forward and easy to understand. From the survey results, it appears the majority of employers either have no opinion one way or the other, or they find the process easy to understand.



The second statement that these respondents were asked to evaluate was, “The current process of open enrollment is a good way for employers to contract with MCOs.” The number of survey respondents that provided an answer to this question is as follows: BWC operations staff - 178, MCO operations staff - 723, and employers – 1,451.

Similar to the previous question, MCO operations staff and employers were more likely than BWC operations staff to agree that the current process is a good way for employers to contract with MCOs. Again, this result is impacted by the high percentage of BWC operations staff reporting that they had no opinion. That being said, all three groups demonstrated a higher level of agreement with the statement rather than disagreement.



Individuals who responded to this question with “disagree” or “strongly disagree” were asked an open-ended follow-up question: “Why is open enrollment not a good way for employers to contract with MCOs?” Summaries of their responses follow.

#### **BWC operations staff:**

Thirteen BWC operations staff members responded to this question. The only feedback given more than twice by these respondents was that employers should have the ability to switch MCOs more often. Some of these responses mentioned changing the frequency of open enrollment to every year, while others reported that employers should be able to switch MCOs at any time if they are not happy with their services.

#### **MCO operations staff:**

Over one-fourth of the MCO operations staff that responded to this question mentioned that the process is confusing and/or overwhelming for employers. Some of these respondents highlighted portions of the process that they think are particularly challenging. Some cited the large volume of marketing materials that employers receive. Others said that most employers do not understand the difference between the BWC and an MCO. Some of the respondents also indicated that the types of claims made by MCOs and Third Party Administrators during open enrollment can lead to confusion for employees, particularly when the claims contradict standards that the MCOs are required to maintain during open enrollment.

The second most common theme in their responses is that MCOs commonly offer incentives or make false advertising claims to employers during open enrollment that are against the terms of their contract. One-fifth of the MCO operations staff cited these types of issues in their responses. Most of these responses focused on violations of the firewall rule or the anti-kickback rule.

Lastly, one-fifth of the respondents mentioned open enrollment frequency in the survey. Slightly more than half of these responses mentioned that open enrollment should occur more frequently. Fifteen employers mentioned that they should be able to change MCOs at any time if they are unhappy with their current MCO.

### **Employers:**

A total of 131 employers provided feedback on why they think open enrollment is not a good way for employers to contract with MCOs. Three themes emerged from this answer.

First, the most common response from this group is that the open enrollment process should be more frequent. This is similar to open enrollment for other types insurance, which is already on an annual basis. Most of these responses suggested that the system move to an annual open enrollment cycle.

Second, 15 employers mentioned that they should be able to change MCOs at any time if they are unhappy with their current MCO. Several of the employers in this group mentioned that MCO/employer relationships should be like any other business contracting relationship.

Third, 15 employers mentioned that the process is confusing or overwhelming. Respondents in this theme frequently cited the large amount of marketing materials that they receive being a burden that makes the process harder to navigate and increases their confusion about the process.

### **BWC Board of Directors Perception on Open Enrollment**

Interviews with the BWC Board of Directors stressed the importance of competition within the managed care system. The Open Enrollment period is one factor in maintaining a level of competitiveness.

### **Employer Perspectives on Open Enrollment**

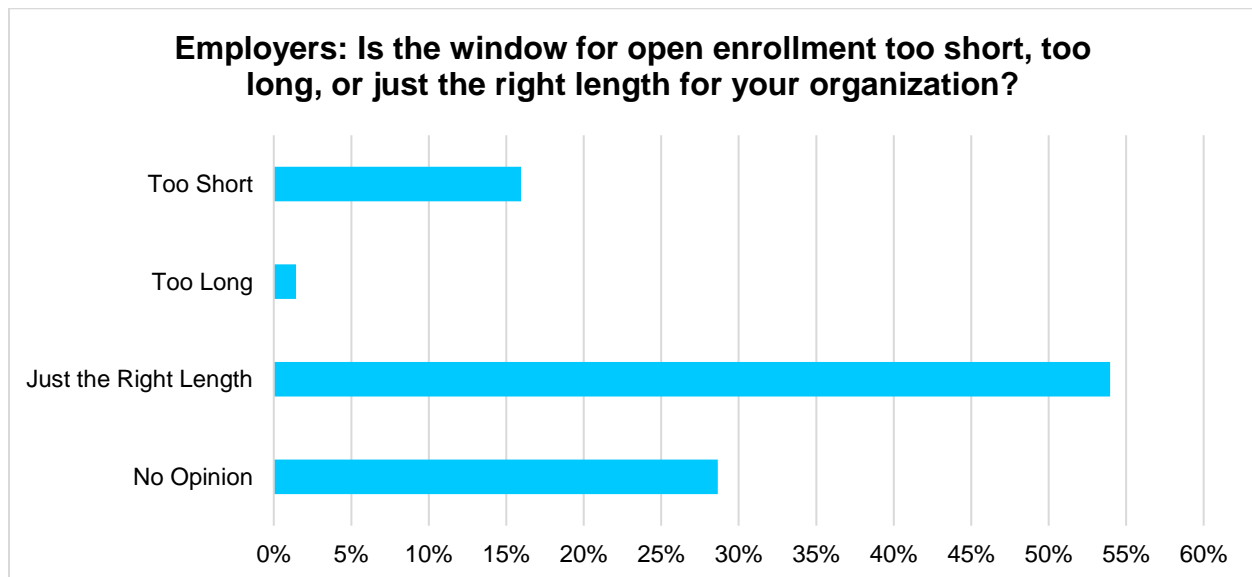
The open enrollment period is held exclusively for employers to either stay with their current MCO or change to another MCO. As such, this stakeholder group was asked additional questions about potential areas of improvement. Employers were asked to report the frequency of their interactions with their organization's MCO in order to identify individuals that have contact with their organization's MCO. For purposes of the remaining data, all analyses filter out survey respondents that responded "never" to this question. This changes the total number of eligible responses for each question from 1,542 to 1,071. The rationale for this data filter is to assess perspectives from individuals within the organization that have greater exposure to the work that MCOs do for their organization and therefore provide relevant data based on their own experiences.



### Length of Open Enrollment

The open enrollment period for Ohio workers' compensation is currently 26 days. The BWC experimented with a 59 day open enrollment window during its first open enrollment cycle in 1998. This window was reduced to 31 days in 2000, 26 days in 2002, 19 days in 2004, then returned back to 26 days where the window has remained. The current open enrollment period provides sufficient time to review the MCO report card and MCO marketing material so that employers can make an informed choice as to the MCO that best meets their needs.

Employers were asked for their opinions on the length of the open enrollment window. A total of 992 employers that have contact with their MCO provided feedback to this question. More than 50% of employers reported the current window for open enrollment is just the right length of time. The second largest category for this item were employers that had no opinion on the length of the open enrollment cycle. These may be employers who have never changed MCOs and have no experience with the open enrollment process, or they may be individuals within their organization that have contact with their MCO but do not manage the selection process. Lastly, around 15% of employers indicated that they would like a longer window for open enrollment whereas only a handful of respondents thought that the window was too long.

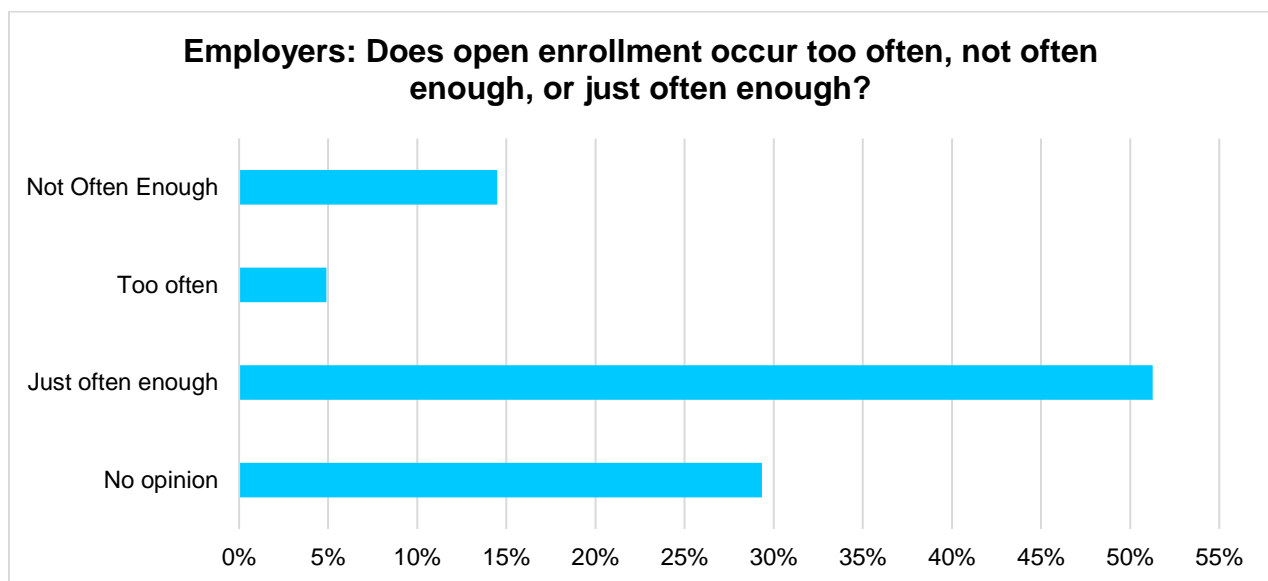


Based on the feedback from employers, the length of the open enrollment window appears to be meeting their needs and does not need to be modified. Additionally, no respondents provided open-ended feedback regarding length of the open enrollment window.

### Frequency of Open Enrollment

The BWC conducts open enrollment every other year. This period in between open enrollment windows has strengths and weaknesses when compared to a one year cycle. On one hand, holding open enrollment every other year leads to less administrative work for the BWC and MCOs and reduces the number of open claims that get transferred between MCOs, thus reducing exposure to potential continuity of care issues (although none were able to conclusively be identified in this report). On the other hand, holding open enrollment on a more frequent cycle offers the additional opportunity for MCOs to compete with each other for employers. That being said, there is no guarantee that this additional opportunity for competition would lead to improved outcomes for employers and injured workers.

Employers were also asked to evaluate the current frequency that open enrollment windows occur. A total of 993 employers that have contact with their MCO provided a response to this question. Similar to the question about the length of open enrollment, the majority of employers reported that the current frequency of open enrollment is just right. Nearly one-third of employers reported having no opinion on the length of open enrollment. As with before, the majority of remaining responses indicated a desire for more frequent enrollment windows, though a slightly larger percentage of employers reported that the open enrollment window was too frequent.



Respondents who indicated that the current frequency of open enrollment was not a good way to contract with MCOs were asked for feedback to improve the system. 66 respondents provided feedback to this question. By far the most common suggestion offered was to increase the frequency by which employers can switch MCOs. 29 respondents indicated that would like to be able to switch MCOs more often. A majority of these respondents indicated that they would prefer open enrollment to be a yearly event. A handful of the respondents suggested that the process of open enrollment should be abolished so that employers can

switch MCOs at any time. It is important to note, however, that these responses reflect a minority of the total responses and the majority of employers indicate that the current frequency of open enrollment is meeting their needs. The BWC does permit employers to change MCOs outside of a designated Open Enrollment Period for extraordinary circumstances. It is rare, but it can and has happened.

### **Industry Standards for Open Enrollment**

Government sponsored programs such as Ohio's Medicaid, the U.S. Government's Medicare, and the federal Affordable Care Act all offer open enrollment annually. In addition, private insurers who have employer sponsored plans also offer open enrollment annually. Individual health plans, basically have on-going open enrollment and the individual is free to change plans at any time. An individual may not be accepted into another plan unless there was continuous coverage for at least three months prior to changing.

In the plans cited above, the insured making the election is an individual and covers only him or herself and/or family members. For Ohio's workers' compensation, the employer is the sole insured entity, but coverage is for many, if not hundreds of lives and changing an MCO can be much more disruptive for the injured worker, through no choice of his/her own.

The majority of employers seem to be accepting of the two year Open Enrollment Period and we see no reason to change.

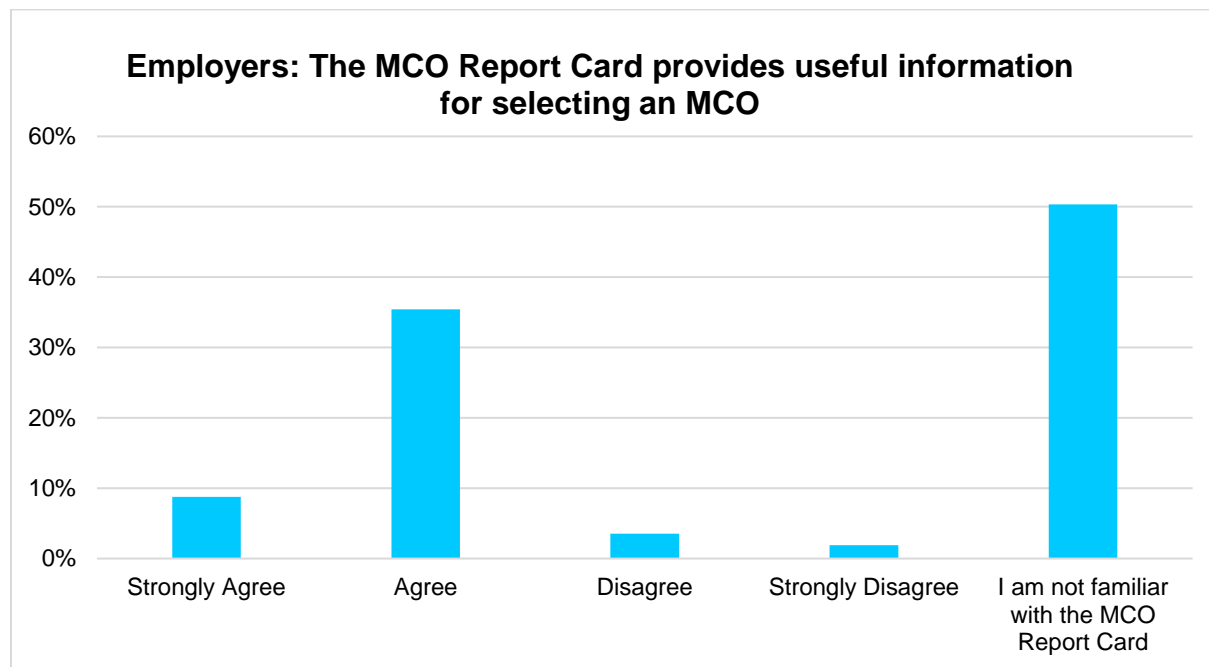
### **MCO Report Card**

The Health Partnership Program created MCOs and charged them with the delivery of quality, cost-effective care for Ohio injured workers through efficient and effective case management strategies. In addition, all Ohio employers were given freedom of choice in selecting an MCO during a designated Open Enrollment Period. To assist Ohio employers in making a selection, the BWC developed an MCO Report Card listing each MCO's performance against various performance benchmarks. This MCO Report Card is published every year, not only during the Open Enrollment period. In 2018, the report card was expanded from two pages to eight pages and significantly increased the amount of information about MCO performance that employers can use when evaluating individual MCOs. The changes made to the 2018 MCO report card:

1. Made it easier to interpret differences between the MCOs.
2. Added MCO penalties that were levied by the BWC – capacity penalty, set-offs for failure to meet performance metrics, and withholding of payments due to significant contract violations.
3. Identified MCO's book of business by industry.
4. Reintroduced employer survey satisfaction results.

### **Employer Evaluation of the 2018 Report Card**

Employers were asked in the online survey to evaluate the usefulness of the 2018 MCO report card for selecting an MCO. A total of 991 employers that have contact with their MCO provided responses to this question. Half of employers indicated that they had no familiarity with the MCO report card. Part of the lack of familiarity can be explained by the fact that the employer email database maintained by the BWC does not distinguish the individual(s) within organizations that are directly involved with open enrollment. That being said, in the open-ended data, several employers indicated that they receive so much communication during open enrollment that it is difficult to distinguish marketing materials from official BWC communication.



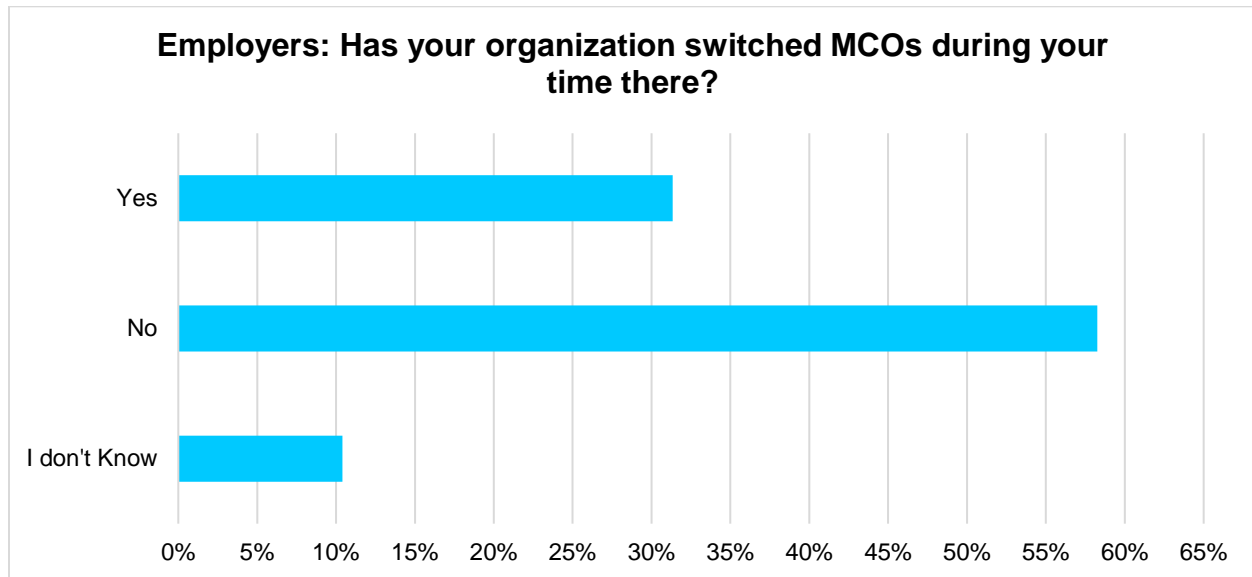
Based on responses to this question, 77 respondents were asked the following open-ended question: “How could the MCO report card be more useful?” Only six responded to this follow-up and none of them offered a response that directly related to improving the report card. This is unsurprising, given the lack of familiarity with the report card among employers.

In a later portion of the survey, respondents who indicated that they had switched MCOs during their time with their organization were asked to provide the reason they switched MCOs. Three of these respondents mentioned the report card as a key factor in their decision to switch.

While employers may be underutilizing the report card, the MCOs have demonstrated that they pay close attention to this analytic document as evidenced by their disputes to the changes made to the 2018 MCO report card. The changes to the report card further distinguish differences between MCOs and may lead to more competitive outcomes from MCOs seeking to improve their performance so as to be seen as competitive with the other MCOs in the marketplace.

### Reasons for Selecting or Changing an MCO

The last closed-ended question the employers were asked about open enrollment was if their organization had changed MCOs during their time with the organization. A total of 999 employers that have contact with their MCO provided feedback to this question. Slightly more than 30% of respondents indicated that their organization had switched MCOs during their tenure.



Respondents who indicated that they have changed MCOs while they have been with their organization were asked to provide information regarding why they switched MCOs. The most commonly mentioned reason for switching MCOs was cost, which is unusual because their annual premium is set by the BWC and does not change with the MCO they select. When delving further, a similar number of employers mentioned TPA services as one of the most important reasons for switching MCOs. Employers mentioned their TPA recommending the switch to their new MCO, having a desire to consolidate services with one company, and in some cases, mentioned a fee waiver for TPA services being offered in return for the switch. However, we have found no evidence that this has adversely affected the injured workers or employers. Finally, a number of employers mentioned switching MCOs in order to receive better customer service. Many of these responses centered on their desire for their new MCO to be better at communicating with them in the process of managing their account.

### Key Strengths and Weaknesses of Open Enrollment

The current process of Open Enrollment seems to be working well and employers are familiar with the practice. The majority of employers indicated satisfaction with open enrollment

overall, the ease of understanding the open enrollment system, and the length and frequency of open enrollment.

HPP provides for employer choice in selecting an MCO. To assist Ohio employers in making this decision, the BWC publishes an MCO Report Card listing each MCO's performance against various quality benchmarks. While surveys indicated that the MCO Report Card is not as widely utilized by employers as desired, it does however have a significant impact for MCO executives. First, the MCOs are acutely aware of their standing as compared to other MCOs and strive each year to ensure their metrics are optimized. Second, it is widely used by MCOs as part of their individual marketing campaigns. Therefore, the MCO Report Card is an important tool to educate the employers as to the strengths and weaknesses of the MCOs and promotes a competitive MCO environment. The BWC should continue to improve and enhance the contents. For example, the BWC can report on Episode of Care measurements to provide additional insight into MCO performance for specific procedures such as knee arthroscopy.

## **6.2 Continuity of Care Management**

Open enrollment provides an opportunity for employers to evaluate and select the MCO they consider best-positioned to deliver quality care to their employees. Although many employers remain with the same MCO, when an employer elects to transfer from one MCO to another, their open claims transfer as well. Once the employer changes their MCO, all the open claims become managed by the new MCO and injured workers must now interact with a new case manager, therefore continuity of care becomes paramount. Although the BWC and MCO systems are expressly designed to minimize the possibility of any disruption to medical management during claim transfer, it is important to consider the process of open enrollment on the injured worker.

To identify the existence of possible care impacts resulting from MCO transfer we conducted an evaluation of two main data sources:

1. Analyses of claims data from individuals whose claim was transferred vs. data from those whose claim was medically managed by a single MCO for the entire life of the claim. It is also important to note that these analyses include data for all MCO changes and not just those that occur as a result from open enrollment.
2. Information collected from the BWC and MCO subject matter experts and contracts regarding BWC policy and procedures for claim transfer.

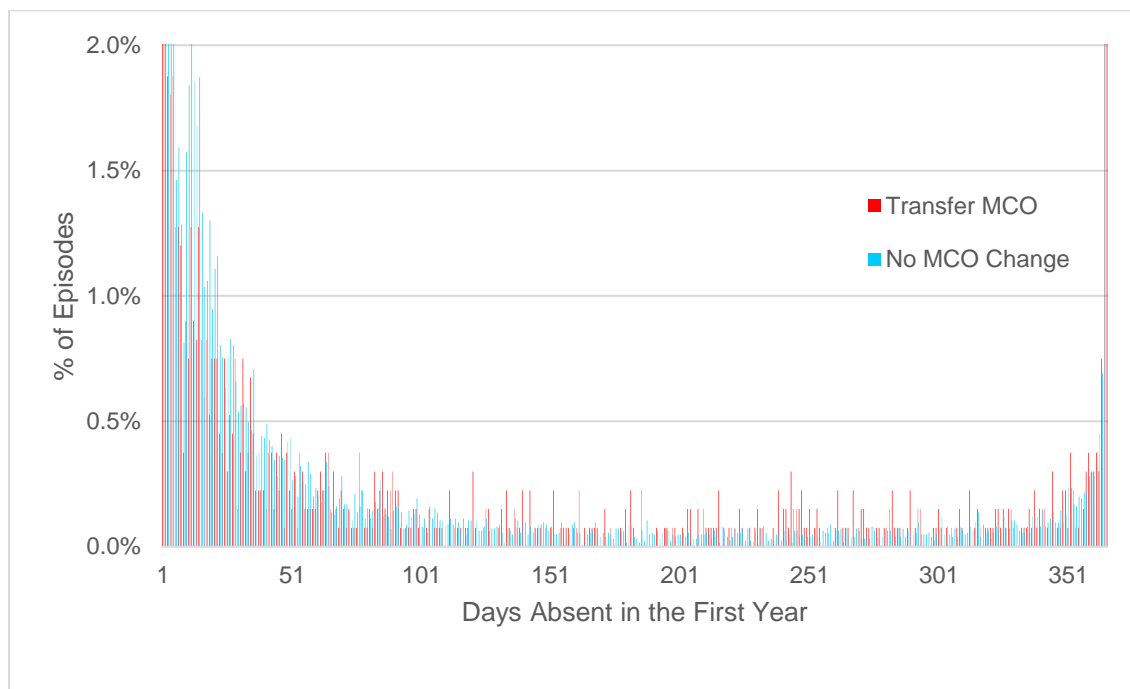
To ensure that data exploration was not biased by the results of employee interviews, hypotheses were formulated prior to employee interviews and will be presented first below, followed by an analysis of the observed results in the context of BWC policies and procedures for claim transfer.

## Data exploration

**Rationale:** Claim transfer from one MCO to another following open enrollment was identified as a process with the potential to impact the continuity of care due to disruption in medical management. It is possible that the transfer of an open claim from one MCO to another could impact the nature, volume, or efficacy of services delivered to an injured worker. If so, this impact could change the total cost of care, which would make it measurable at a population-level as a difference in care cost. It is important to note that a change in cost alone is not enough to draw conclusions about the continuity of care injured workers are receiving, as it only reveals if there are changes in cost, and does not reflect if the changes are due to an improved plan of care or due to inefficiencies in the system. It also does not take into account that an initial increase of cost may actually produce improved outcomes in the long term which saves dollars on the entire claim. Future studies examining this topic could seek to identify differences between specific types of MCO transitions.

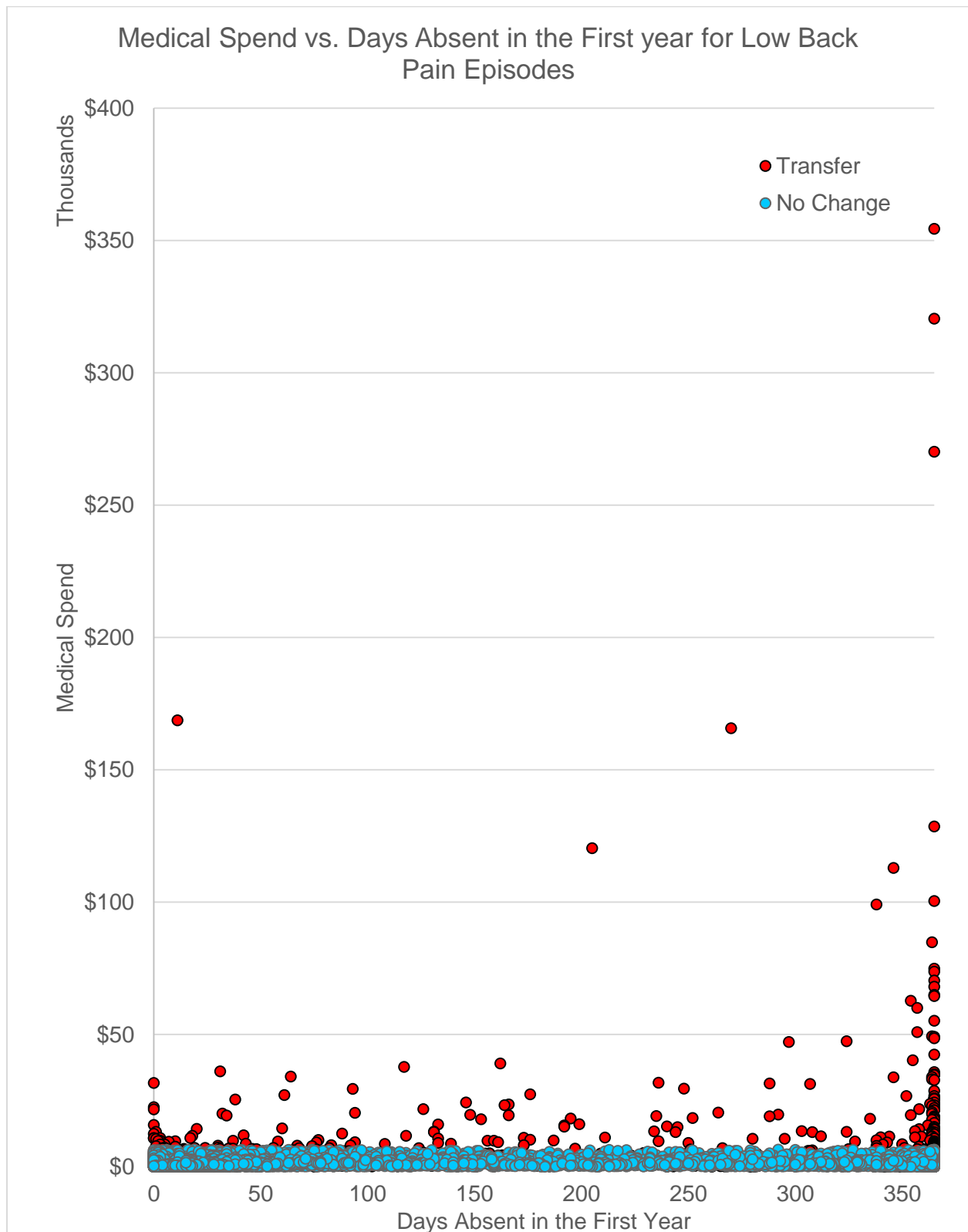
**Methods:** Episodes of care (described in deliverable 1 report) were used to conduct this analysis and here we used the low back pain episode. Analysis was conducted on the population of claims with original date of injury occurrence between 01/01/2012 and 10/1/2017. Injured workers who currently returned to work were measured according to the total number of days missed in the first year subsequent to their injury. The analysis was conducted on allowed, valid, lost time claims that were grouped according to whether they changed MCOs during their episode or remained with a single MCO for the duration of their episode.

**Results:** Low back pain episodes of care lost time claims that are transferred from one MCO to another have an increase in medical costs and a significant increase in duration of absence from work in the first year ( $p < 0.0001$ ). Due to the trend in observed claim costs for the low back pain episode, further investigation will be required in order to state this conclusively for other injuries or across the injured worker population. However, the trending patterns support the hypothesis that lost time claims that are transferred to a new MCOs have increased medical costs.



The observed elevations in cost could be due to various individual factors. First, for catastrophic cases, the receiving MCO is notified prior to transfer so the care plan can be reviewed and the nurse case manager is prepared to immediately resume medical management upon receipt of the claim. Similar notice is given for claims that are not considered catastrophic but serious enough that medical management must not be disputed. Second, transferred claims are likely to be slightly more expensive on average because they either care plan will remain equivalent or become stronger, due to the requirement that changes to transferred care plans be improvements only. Thus, MCOs having the option to alter the care plan for transferred claims are likely to either maintain or increase claim costs, ultimately resulting in a slight increase of total medical costs of transferred claims. It is important to note that this trend was observed using a normalized data set for low back pain injuries, and while the majority of the low back pain injuries where an MCO transfer occurred are similar in cost, there are some claims that have increased medical costs for the days absent compared to their peers. Similar results are possible for other injuries or across injured workers' claims, however additional research will need to be conducted.





**BWC policies and procedures for claim transfer:**

To ensure continuity of care for transferred claims, the BWC has implemented numerous mechanisms to prevent interruptions in care, including contractual definitions of responsibility and adherence to care management plans during claim transfer.

As stated above, the receiving MCO is provided a list of catastrophic claims and claims requiring a higher degree of medical management in advance of transfer, so the nurse case managers are prepared to begin medical management immediately upon receipt. The MCO policy reference guide dictates that a receiving MCO is not allowed to make any changes to the current plan of care on an active claim unless the following criteria are met:

1. The MCO identifies an alternative plan of care that improves upon the existing plan of care.
2. The MCO proposes the new plan of care to both the injured worker, their employer and provider and all parties agree to the new plan of care.

The purpose of such a strict protocol for transferring active claims is to protect the continuity of care an injured worker is receiving for their work-related injury and ensuring that an MCO can only modify the existing care plan when they are confident that they have identified a new plan of care that improves on the plan that is transferred from the previous MCO.

Although it seems that the costs of transferred lost time claims are increased, the BWC policies are functioning as intended as reflected by the fact that outcomes in RTW are nearly identical, despite being statistically different, between injured workers diagnosed with low back pain who change MCOs and those who do not. The fact that absence duration is not greatly impacted by transfer of MCO implies that care continuity is not disrupted in the transfer process. This is a critical component of the cooperative efforts between the BWC and the MCOs to ensure that no injured worker is negatively impacted by open enrollment. The observed differences in cost and duration of absence in the first year represent areas for optimization in the open enrollment process. While we do expect the potential for increased claim costs associated with the transfer, we do not believe that this negatively impacts the injured worker and, in fact, represent increased medical management. The significant increase in duration of absence in the first year for low back pain episodes where the injured worker transferred MCOs is an area that warrants further investigation to ensure that the increase in absence is not negatively affecting the injured worker.

## **6.3 Marketing Disputes in Open Enrollment**

The integrity of the competitive marketing environment promoted by HPP mandates that marketing strategies employed by the MCOs adhere to BWC guidelines as explained in the

Ohio Revised Code. A significant number of MCO Executives, MCO staff, and BWC staff raised the issue of disputes during the Open Enrollment Marketing Period based on perceived marketing practices. Interviewee responses on this topic generally fall into two categories: The first was the perception that MCOs appeared to be violating either the “firewall” or “anti-kickback” rules established by the BWC through their affiliated TPA. The second common response included the perception of potential manipulation or misstatement of the performance measures of MCOs, thus making the MCO look better than it may actually be.

These responses represent individual perceptions, making them susceptible to human error or misunderstanding. For example, respondents reporting suspected violation of law regarding TPA affiliates may perceive relationships with TPAs to be unfair or unfavorable, but the existence of TPA affiliation is not a violation. Specific conditions must be met for the reported perceived violation to exist, such as offering different services, or items of financial value based upon the selection of the MCO.

Interview responses are not adequate to conclude the existence of any such violations in practice, but are important in that they reflect feelings that undesirable or potentially unacceptable marketing practices exist. If such responses reflect more than simply a sentiment of distrust toward the process of open enrollment, additional education could be helpful. For example, communication indicating the importance of reporting such suspected violations to the MCO Marketing Panel. In either case, it is important to continue open communication in order to continue to build trust and understand areas for additional refinement. Improved communication and transparency could also increase the likelihood of the Panel hearing of such violations if they occur, which is required for the Panel to respond to the issue.

Ultimately, the regulations around open enrollment exist to ensure that employers can make an accurately informed decision in selecting the MCO able to provide the highest value care for their injured workers. It is important to preserve this element of the system as it is designed to protect the employer and injured worker. The BWC has worked to create policies protecting this process. Specific requirements are outlined in the agreement that all MCOs and their affiliated companies are to refrain from the following marketing tactics:

1. Use of information that is false, fraudulent, deceptive, or misleading.
2. Violating the ban on direct solicitation of employers outside of an open enrollment period.
3. Violating the MCO “firewall” rule.
4. Violating the MCO “anti-kickback” rules.

In spite of this agreement, there are still allegations of MCO unfair marketing practices and/or violations of the marketing rules established by the BWC. This has been an enduring challenge for the BWC to tackle during open enrollment. Previously, the BWC required all marketing documents to be approved prior to their market release in order to guarantee that all statements made by the MCO were true and factual. This proved to be an incredibly laborious process for the BWC and utilized a disproportionately large number of BWC resources which

could have been diverted for tasks to directly improve care for injured workers. In response to this undue time demand on the BWC, the Marketing Review Panel was established and consisted of MCO executives. This panel provides independent reviews of marketing complaints reported by MCOs. The panel is chaired by the President of the MCO Business Council and contains five additional representatives from MCOs. None of these representatives may be from an MCO involved in the marketing violation that is under review. The panel also includes an independent arbitrator. In cases where the grievances cannot be resolved by the Marketing Review Panel, this process can lead to litigation. In spite of allegations in the survey data, we saw no evidence that marketing violations undermined the goals of HPP.

### **Feedback on the Market Review Panel process**

Meetings with BWC staff indicate that MCOs have a desire for the process of reporting violations to be anonymous. Interviews and surveys have indicated that this may be particularly true with larger MCOs that are cited as more frequent violators of marketing regulations and have considerable resources at their disposal that smaller MCOs lack. Additionally, some MCOs have indicated the desire to reinstitute the system where all marketing materials must be approved prior to release in the market in order to remove the necessity of utilizing the Marketing Review Panel. This may not be feasible because returning to this process introduces undesirable operational inefficiencies. Note that this request for additional prescriptiveness is in contrast to the overall perception that the BWC is overly prescriptive.

The needs for timely production of marketing material outweigh the needs for additional marketing material review. The creation of the Marketing Review Panel has improved the marketing dispute process and saved the BWC time by no longer needing to approve each piece of marketing.

## 7 EXECUTIVE SUMMARY

This deliverable focused on identifying the strengths and weaknesses of the MCO environment. The MCO environment is the combination of participants and organizations that interact to get an injured worker safely back to work. This includes the efforts of both the BWC and MCOs: The MCOs execute medical management and cost containment, while the BWC oversees proper execution of these duties and integrates them with other elements of claims management.

The strengths existing in the current managed care system create the foundation for continuous improvement. The two overarching strengths are:

- 1) The public-private partnership enables an equal balance between injured worker and employer interests. The working relationship between MCOs and the BWC brings to the table the combined interests of protecting the experience of injured workers and employers, using the state fund appropriately, and making processes more efficient based on the principles of market competition. These interests create a MCO environment that has the potential to provide the most effective service to workers' compensation stakeholders while also maximizing system efficiency. This strength can be leveraged for future organizational development and improvement.
- 2) The nature of the system vests a state agency the accountability for establishing benchmarks that facilitate efficient management of claims. Ohio's workers' compensation system is monopolistic due to the BWC being the sole provider of benefits, medical payments, and claims decisions for work-related injuries or diseases. In alignment with legislation, the BWC has the authority to enter into an agreement with MCOs to medically manage work related claims. The BWC also has the authority to set benchmarks and expectations of MCOs based on desired managed care outcomes.

Balanced against the strengths, the areas of opportunity that were identified can be categorized as follows:

- 1) Regulatory prescriptiveness - It is necessary to define requirements, process and actions in a monopolistic system that would normally be inherent in a commercial market. Therefore we recommend:
  - The BWC conduct an evaluation of MCO billing review problems and evaluate if additional requirements are necessary to ensure that bills are complete, accurate, valid, and appropriate. The BWC may need to increase their supervision over this process temporarily through the activation of a greater number of the available functionalities of the BWC software(s) currently used for review.
  - To emphasize the importance of clinical editing, the BWC could modify the process of imposing administrative setoffs for data inaccuracy by making the penalty proportionate

to the dollar value instead of count of instances in which review would have resulted in inappropriate payment. Conversely, the BWC could incentivize excellence in this area by creating rewards for obtaining exceptional results in completeness, accuracy, and validity of submitted bills.

2) Opportunities to improve communication.

- FROI three-point contact and return to work coordination will continue to have a degree of duplication of labor and is necessary for each party to fulfill their respective responsibilities. Ensuring accurate information improves services provided for the injured worker and ensures Ohio employers that the injury was a work-place injury and the injured worker is an employee. However, based upon MCO and BWC staff interviews, there is still room for better adherence to workflows to minimize any unnecessary duplication.
- In order to enhance the negotiation process, the BWC could contract with a professional negotiation mediator who could assist in the negotiation process to achieve the following: focus on the interests of injured workers and employers, utilize methods for a consensus building approach to negotiation, and concentrate on an iterative review process that allows both the BWC and MCOs to contribute to the development of key performance indicators that meet the objectives of the HPP.

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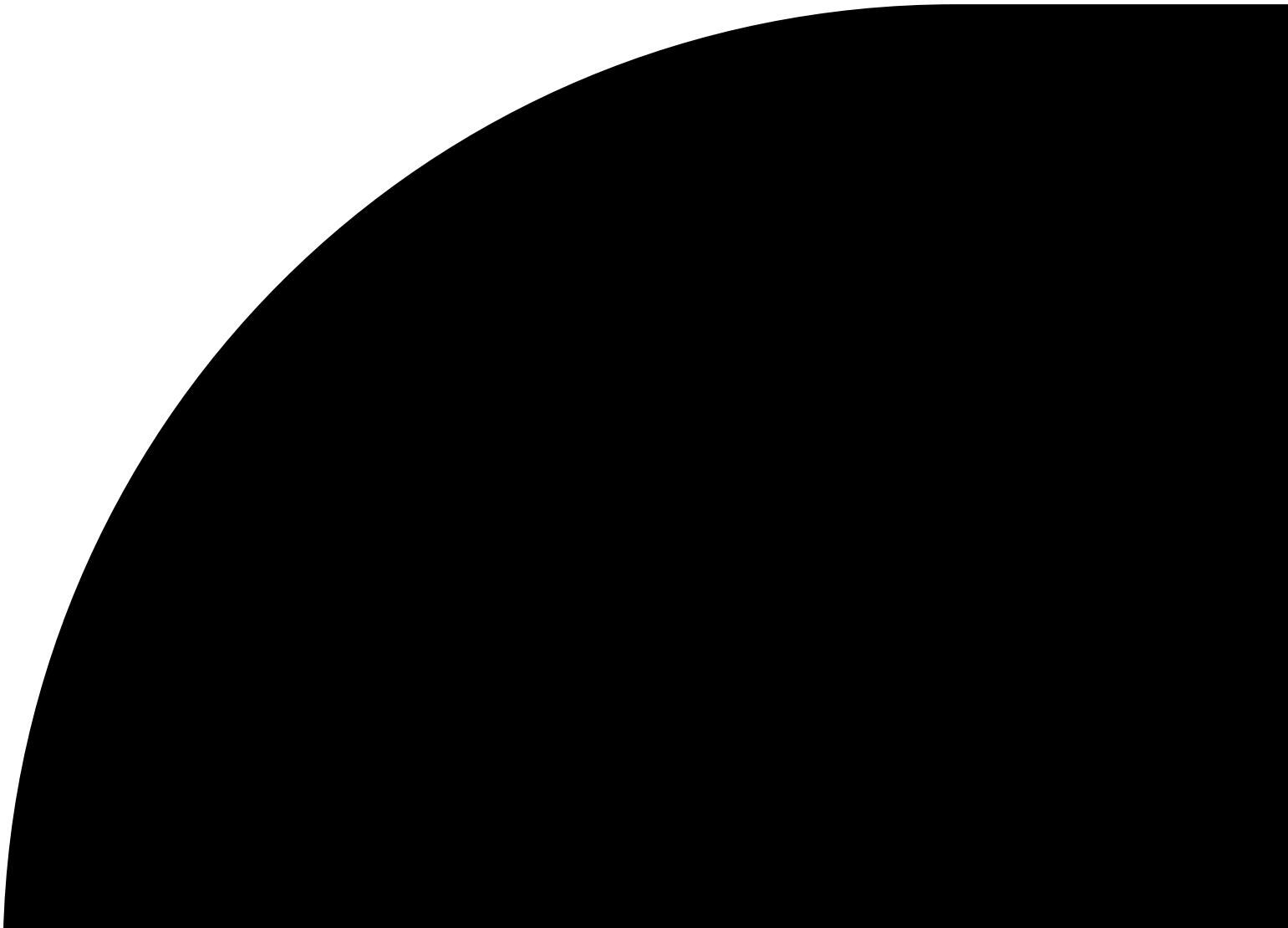


# **Deliverable 3**

**DXC report for The Ohio Bureau of Workers' Compensation  
Managed Care Organization Impact Study**

RFP DABWC-18-EP-002

12<sup>th</sup> December, 2018



## **Deliverable 3: Assessment of the current MCO performance measurement protocol**

# 1 EXECUTIVE OVERVIEW

The Ohio Bureau of Workers' Compensation (BWC) maintains oversight of the managed care organization (MCO) medical management of claims and performance in reducing injured worker disability duration. The BWC has developed and maintained a system in which contracted MCOs are evaluated and compensated according to their activities and performance as measured both by process and outcome indicators for claim and medical management services. This deliverable will look at these measurement protocols to assess their adequacy in measuring MCO performance.

<i>Goals of deliverable 3 as stated in the project RFP</i>		
BWC RFP Exploratory Project Solicitation DABWC-18-EP-002	Deliverable 3 title, RFP pg. 6	"Assessment of the current MCO performance measurement protocol"

This deliverable will look at two key measurement protocols: administrative benchmarks and Measurement of Disability (MoD) scoring. Administrative benchmarks are timeline and accuracy requirements for MCO processes. Five of the existing administrative benchmarks will be addressed in this deliverable. They are First Report of Injury (FROI) timing, FROI turnaround, provider bill timing, FROI data accuracy, and provider bill data accuracy. These benchmarks were chosen because they are measured the most frequently of all administrative benchmarks, and they are the most common ones for which penalties are levied against MCOs who fail to meet them. MoD scores measure the ability of an MCO to provide adequate medical management services and include a "return to work" component and a "recent medical costs" component.

## Key Findings

The key findings from our analyses are as follows:

- Average FROI timing has remained generally consistent over the last 10 years, improving at a rate of only 0.004 days per quarter.
- Average FROI turnaround has remained generally consistent over the last 10 years, improving at a rate of only 0.007 days per quarter. However, overall average performance has consistently been out-performing the current benchmark.
- Average bill timing has decreased over the last 10 years at a rate of 0.02 days per quarter.
- Average FROI data accuracy has increased over the last 10 years at a rate of 0.06% per quarter.
- Average provider bill data accuracy has increase over the last 10 years at a rate of 0.04% per quarter.
- There is statistically significant variability in MoD score performance based on an MCO's claim volume: the lower the claim volume, the higher the score variability.

- The higher an MCO's MoD score, the more likely its staff are to claim that MoD is a good indicator of performance
- MCOs face very small penalties for inappropriate MoD appeals, even though this category of appeals represent a significant time cost for the BWC MCO Business Reporting Unit.
- MoD is more accurate than ODG's return to work estimates for predicting days absent among Ohio's injured workers.

Each section will provide an overview of the MCO measurement protocols, identify the pros and cons, and provide recommendations to strengthen them, where appropriate. The report will conclude with a comparison of DXC's episode-based evaluation of the existing MCO outcome performance, accompanied by a discussion of potential measures or methods that could strengthen outcome performance evaluation.

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## 3 DELIVERABLE 3 OVERVIEW

### 3.1 Report Aims and Organization

This report will provide an assessment of the methods by which MCO performance is measured. It will focus specifically on administrative benchmarks and MoD scoring which are represented below:

- Analysis of appropriateness of current administrative benchmarks;
- Comparative evaluation of the current MCO performance measurement tool (MoD) in terms of accuracy, reliability, and similarity to the industry standard ODG disability calculator;
- Identification of opportunities to improve or strengthen MCO performance measurement protocols;
- Setting forth appropriate recommendations for changes to the current protocols.

#### Abbreviations & Acronyms

Abbreviation	Definition
ADR	Alternative Dispute Resolution
BWC	Bureau of Workers' Compensation
CDWC	California Division of Workers' Compensation
CSS	Claims Service Specialist
DoDM	Degree of Disability Measurement
EDI	Electronic Data Interchange
FROI	First Report of Injury
IC	Industrial Commission
IW	Injured Worker
LDW	Last Day Worked
MCO	Managed Care Organization
MoD	Measurement of Disability
ODG	Official Disability Guidelines
RTW	Return to Work
SOM	Service Office Manager
URAC	Utilization Review Accreditation Commission

## 4 ADMINISTRATIVE BENCHMARKS

To ensure quality within the current BWC managed care system, MCOs are subject to financial setoffs and/or an at-capacity determination (meaning an MCO is not permitted to accept any new employers) if an MCO does not perform according to administrative performance benchmarks. These determinations are levied at a monthly, quarterly, and on-occurrence basis, depending on the process being measured. The following table outlines the setoff activity, timing, benchmark, and related financial penalty.

Activity	Setoff Timing	Benchmark	Penalty
FROI timing*	Monthly	12 calendar days	1.25% of monthly administrative pay
FROI Turnaround	Monthly	2.5 calendar days	Placed at capacity
Bill timing*	Monthly	8 calendar days	1.25% of monthly administrative pay
FROI data accuracy*	Monthly	94% accuracy (based on specific elements)	1.25% of monthly administrative pay
Provider bill data accuracy*	Monthly	98% accuracy (based on specific elements)	1.25% of monthly administrative pay
Inpatient hospital bill payment accuracy	Quarterly	90% accuracy (based on specific elements)	1.50% of monthly administrative pay in last month of quarter
Failure to implement system changes by given deadline	On occurrence	30 calendar days past capacity determination	1.00% of monthly administrative pay per calendar day
Receipt of qualified opinion on SSAE report	On occurrence	Receipt of opinion	15.00% of monthly administrative fee in August following receipt
Material failure to submit audit or compliance materials	On occurrence	First day after due date	1.00% of monthly administrative pay per calendar day
Inappropriate MoD appeals	On occurrence	Based on overall appeal success rate and determination of appropriateness	\$5, \$25, or \$50 per inappropriate appeal depending on overall appeal success rate during quarter

\* These are also capacity measurements that are evaluated weekly

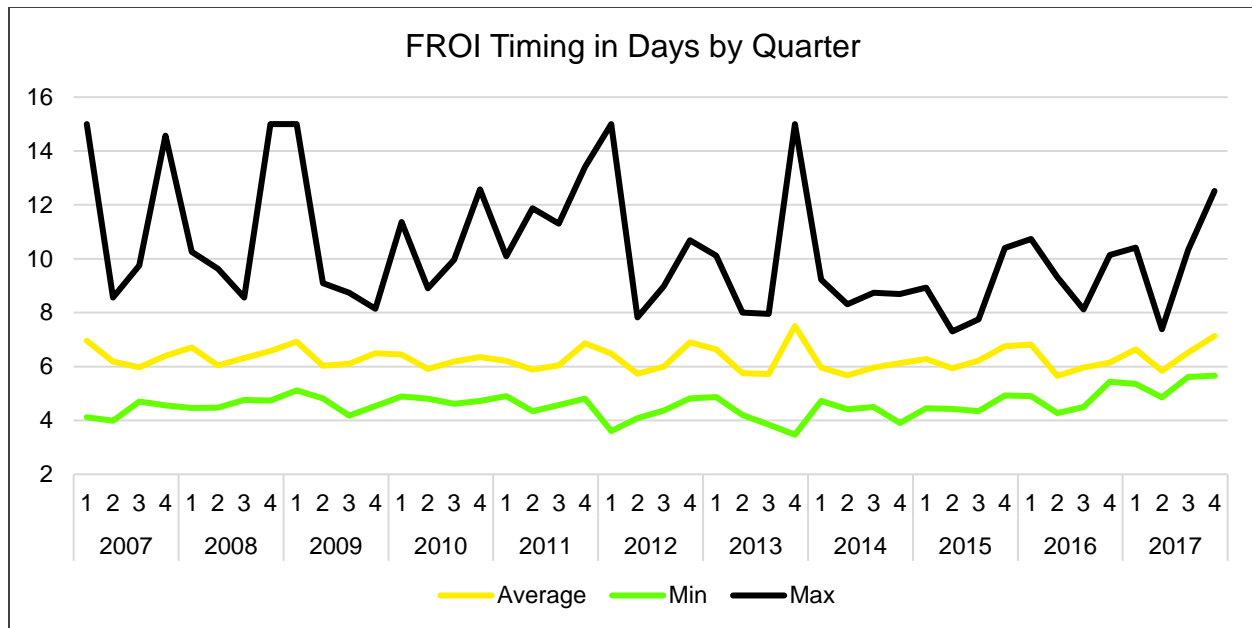
The underlying logic of these setoffs is deterrence; if the possibility exists for an MCO to lose money or be put at capacity for executing a specific administrative activity poorly, they should perform in such a way as to ensure they are not subject to a penalty. Based on the availability of data and count of setoff occurrences, this report will look specifically at the ability of monthly set off measures in deterring poor performance in their respective activities. Analyses of these payment elements will allow us to look objectively at the capacity for them to operate as intended.

It is important to note that Ohio's system is unique. There are very few other monopolistic systems, and Ohio is the only monopolistic system that utilizes private medical management services. Because of this, the metrics used to measure Ohio MCOs' performance are highly difficult to compare to other environments as no other environment has private medical management as part of a monopolistic system. Therefore, our primary method for analyzing MCO performance on administrative benchmarks is to compare the MCOs against themselves over time. For each benchmark, ten years of MCO performance is presented and analyzed. By observing performance over time, we can make recommendations for potentially resetting administrative benchmarks.

## **4.1 FROI Timing**

Currently, MCOs are required to ensure that First Reports of Injury (FROIs) are submitted to the BWC within 12 calendar days of the date of injury. Section 4C(1)(a) of the MCO contract explains this requirement and measurement protocol. MCOs are measured exclusive of the 5% of claims with the longest lag times. In 2017, the state average for FROI timing was 6.5 calendar days. The average FROI timing between 2007 and 2017 was 6.3 calendar days. This shows that FROI timing has remained relatively consistent over time but has also remained significantly shorter than 12 days. The following graph shows average FROI timing, minimum FROI timing, and maximum FROI timing (controlled at 15 days) for each quarter from 2007 to 2017, excluding the 5% of claims with the longest lag time.



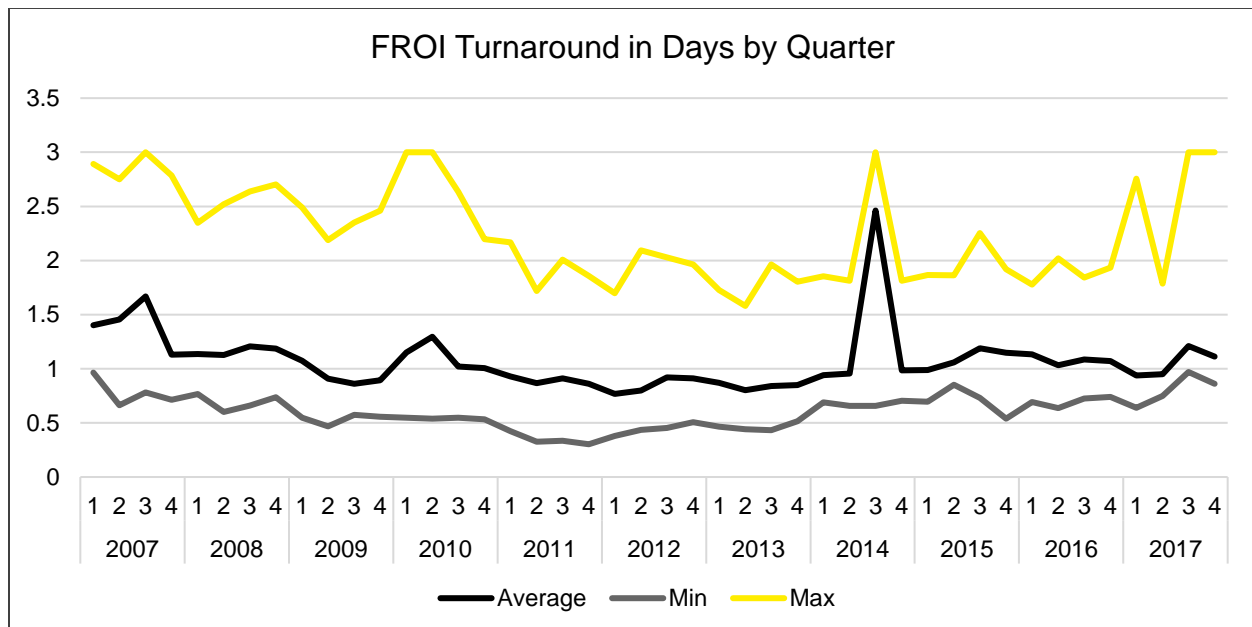


The last time the FROI timing benchmark was reset was in 2012 when it was reduced from 16 days to 12 days. Based on MCO performance, we recommend an additional reduction to 10 days. This provides allowance for the current state average while providing additional motivation to MCOs which perform below average to improve. The 5% exclusion rule is designed to control for FROIs which have an unusually high lag time, for example, due to Occupational Disease delays. However, maintaining the current definition of FROI timing measures the MCOs' contractual responsibility in educating providers and employers about the importance of timely processing as explained in chapter 2, page 17 of the MCO Policy Reference Guide. An additional indicator, FROI turnaround measures only the time it takes for an MCO to file a FROI with the BWC once it is received from the provider, and an MCO can be put at capacity if their average FROI turnaround is greater than 2.5 days. However, FROI turnaround does not measure an MCO's ability to educate and work with providers the way that FROI timing does. Therefore, we recommend continuing to utilize FROI timing as a key indicator.

## 4.2 FROI Turnaround

As mentioned in section 4.1 (FROI timing), FROI turnaround refers to the period of time it takes for an MCO to process a FROI and file it with the BWC. The current benchmark for FROI timing is 2.5 days as per section 2F(2)(m) of the MCO contract. There is no financial penalty for missing this benchmark; rather, the MCO is given a capacity designation during which they are unable to enroll any new employers. In addition to the 2.5 days benchmark, MCOs are required to process 70% of FROIs within three calendar days and the remaining 30% within an additional two calendar days, such that all FROIs are processed within five days.

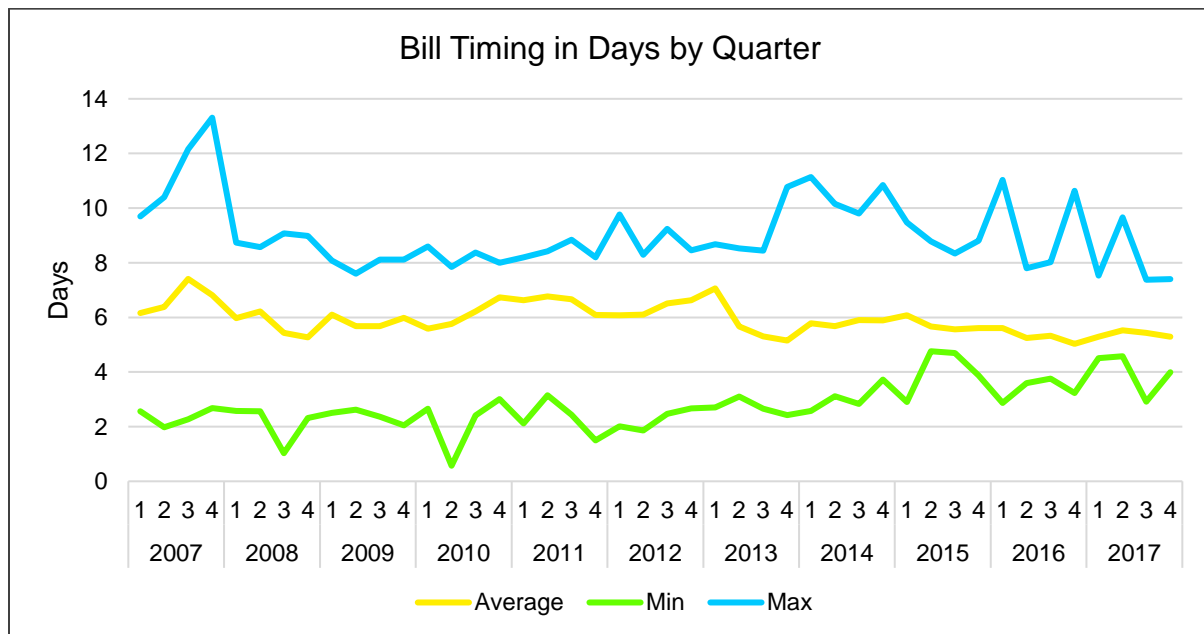
Currently, average FROI turnaround is well under this benchmark. In 2017, the average was 1.05 days. Over the last 10 years, the average has been 1.07 days. While there has been little improvement in FROI turnaround timing over time (an average decrease in 0.007 days per quarter), performance has been consistently below the current performance threshold. In order to drive continued improvement to expedite commencement of claim management, we recommend lowering the benchmark to two days and requiring that 80% of FROIs be processed within three days and the remaining 20% within an additional one day. Additionally, while the time period this metric measures is intrinsically included in FROI timing, it acts as a specific measure of an MCO's ability to reach out to the employer, injured worker, and provider in a timely manner to obtain the necessary data elements for FROI processing. Therefore, we recommend keeping the FROI turnaround metric. The following graph shows FROI turnaround performance over the last 10 years, with the maximum turnaround capped at 3 days.



## 4.3 Bill Timing

Bill timing is measured as the time between the MCO receipt date, or the most recent time the bill became payable, to the date submitted to BWC (“bureau receipt”). The current benchmark is eight calendar days, as per section 4C(1)(b) in the MCO contract. MCOs are measured based on either a four- or five-week reporting period, with the week with the longest average lag time excluded from the calculation. This exclusion is reversed if the worst week is more than two times the average of all weeks except the worst.

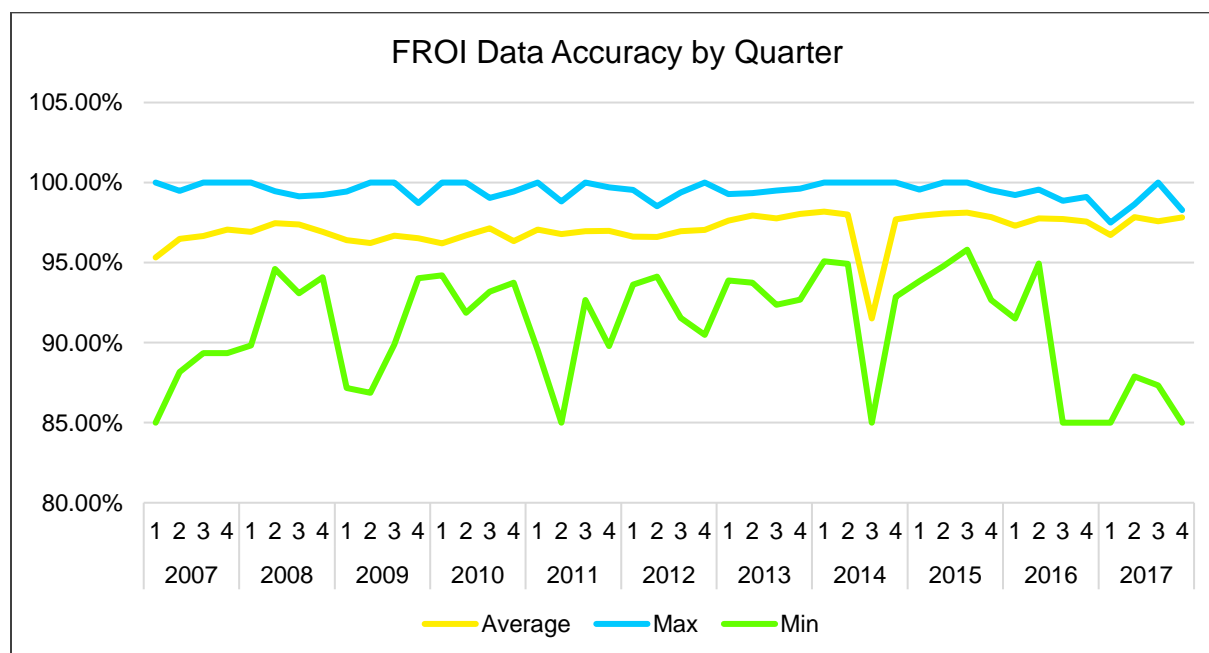
Based on data from 2007 to 2017, we can see that average timing has improved, on average, 0.02 days per quarter. The average timing in 2007 was 6.7 days, 2012 was 6.3 days, and 2017 was 5.4 days. Because of this continual improvement, we recommend resetting the bill timing benchmark to 7 days. The following graph shows the average, maximum, and minimum bill timing for all MCOs per quarter.



## 4.4 FROI Data Accuracy

FROI data accuracy measures the ability of MCOs to accurately record key data elements in FROIs. Ensuring accurate data helps to ensure stakeholders can be contacted easily, expedites claim processing and helps prevent claims being delayed or disallowed unnecessarily. While there are many data elements, MCOs are measured only on the accuracy of two: the policy number and the date of injury. The current benchmark is set at 94% accuracy as explained in section 2F(2)(q) of the MCO contract. Accuracy is calculated as:  $1 - (\text{Total errors} / \text{Total FROIs})$ . An error in the policy number counts as two errors while an error in the date of injury counts as one. This is explained in section 4C(1)(c) of the MCO contract.

In 2017, average FROI data accuracy was 97.5%. Over the last 10 years, the average has been 97.6%. Because of this consistently high performance, we recommend resetting the benchmark to 96%. The following graph shows state-wide FROI accuracy performance over the last 10 years. The observed increases in 2014 are potentially associated with updates to the specific definition of FROI data accuracy during this time period.



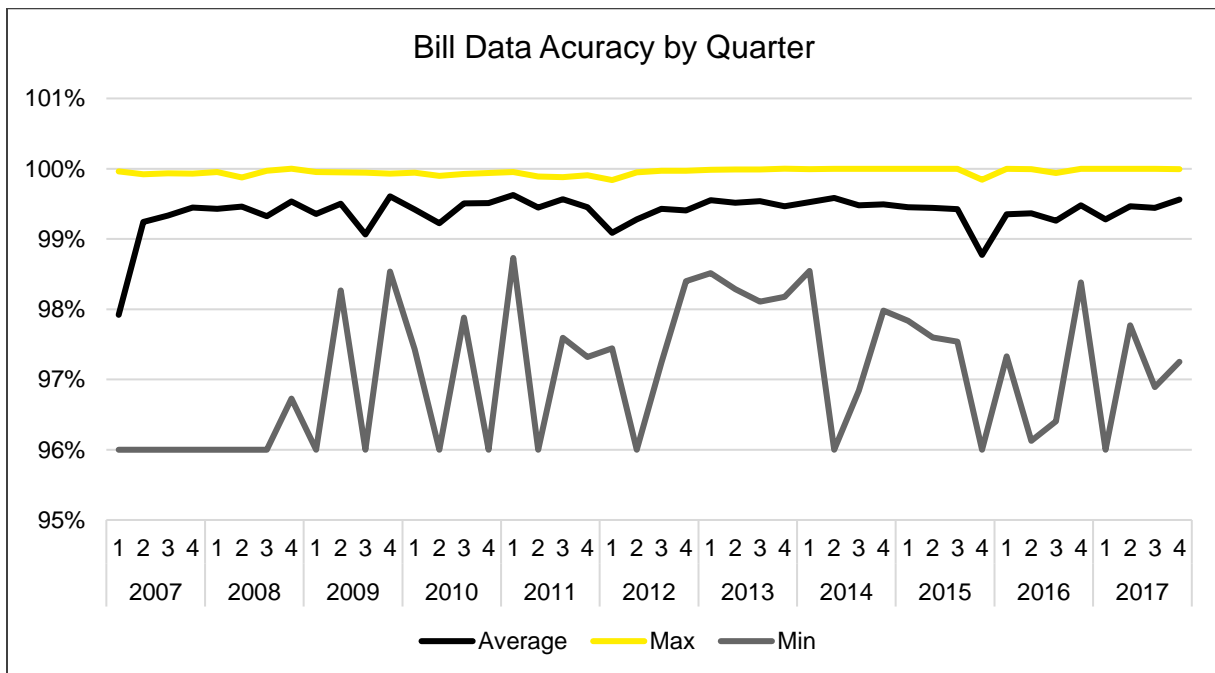
Both Ohio and California employ similar pre-filtering criteria at the point of electronic data submission to ensure that necessary data elements are included. California's Division of Workers' Compensation (CDWC) also has similar data accuracy requirements<sup>1</sup> to those employed in Ohio. They measure accuracy according to a data element classification system. First they classify data elements as mandatory, conditional, or optional. They then classify potential errors in those data elements as fatal, serious, or minor. All data elements in a FROI

<sup>1</sup> "California EDI Implementation Guide for First and Subsequent Reports of Injury (FROI/SROI)."

contain these classifications. Based on the number and type of errors, the CDWC will either accept, accept with errors, or reject the FROI. However, this system is different from Ohio's in that California's FROI fulfills both medical as well as compensation needs. Although the difference in workers' compensation systems limits the applicability of this comparison, elements of this data accuracy pre-filtering system are already encapsulated within Ohio's application processing interface (API) data accuracy evaluation occur.

## 4.5 Bill Data Accuracy

In addition to being measured on FROI data accuracy, MCOs are also measured on provider bill data accuracy. Section 2F(2)(r) of the MCO contract sets the current benchmark for bill data accuracy at 98%. Section 4C(1)(d) of the contract explains that bill data accuracy is calculated by subtracting from one the total number of bills with errors divided by the total number of bills within the reporting period. Errors are defined as the absence or misuse of specific explanation of benefit codes in the bill. In 2017, the average accuracy was 99.4%. Over the past 10 years, the average has also been 99.4%. Because of this consistency in high performance, we recommend resetting the benchmark to 99%. The following graph shows average, maximum, and minimum performance (minimum grounded at 96%) over the last 10 years.



## 4.6 Summary of Recommendations

### **FROI Timing:**

- Reduce benchmark to ten days as determined by average MCO performance.
- Continue using FROI timing metric as opposed to switching to FROI turnaround metric in order to measure MCO's responsibility to educate providers.

### **FROI Turnaround:**

- Reduce benchmark to 2 days as determined by average MCO performance.
- Continue using FROI turnaround metric in addition to FROI timing metric in order to measure MCO's ability to contact and get information from required parties in a timely way.

### **Bill Timing:**

- Reduce benchmark to 7 days as determined by average MCO performance.

### **FROI Data Accuracy:**

- Increase benchmark to 96% as determined by average MCO performance.

### **Bill Data Accuracy:**

- Increase benchmark to 99% as determined by average MCO performance.

## 5 EXCEPTIONAL PERFORMANCE INDICATORS

Incentives are tools that are used to provide continuous improvement to mitigate risks, in comparison to direct regulation, which generally prescribes a minimum standard. Exceptional performance indicators (EPI) were introduced in 2016 in order to further incentivize MCO medical management of cases with particular challenges. Four of these EPIs were put into place in 2016 while a fifth was introduced in 2018. In a traditional managed care environment, where the MCOs are at full risk, all of these measures would be utilized by the MCOs to control costs and safely return injured workers to the workplace.

**Medication management.** The first part of this measure requires MCO intervention on individuals over 65 years of age who are prescribed a medication on the Beers Criteria for Potentially Inappropriate Medication Use in Older Adults.<sup>2</sup> This portion of the measure requires that the BWC paid for the prescription, the MCO reviewed the eligible claims and, to have a successful intervention, followed up with the prescribing provider. This measure promotes the reduction in inappropriate medication, because a successful intervention requires the clinical rationale supporting the intervention. The target maximum successful intervention rate has decreased from 15% in 2016-2017 to 10% in 2018-2020. This suggests that further benchmarking should be used after the 2020 contract year.

The second medication management measure requires MCO intervention on injured workers who take four or more of eight drug classes known to add to the risk of death when taken together. This measure considers that the injured worker may require this combination of medication. This measure maximum success rate has decreased by 2.5% for 2018-2020 to 17.5%.

**Vocational rehabilitation.** This EPI is made up of two categories: decision making and outcomes. Decision making requires referrals for vocational rehabilitation, assignment to a rehabilitation case manager, and avoiding pre-plan closures.

The outcomes category measures rehabilitation closure with specified return to work category. The maximum target for Vocational Rehabilitation Closure with RTW is 53.45%.

**Transitional work.** This EPI consists of increasing the award of transitional grants to employers and increasing the use of transitional return to work for injured workers. Use of Transitional Return to Maximum Target has remained constant at 22% for 2016-2017 and 2018-2020.

**Legacy return to work.** According to the 2017 annual HPP report, legacy RTW claims “have the greatest impact on the workers’ compensation system and on the lives of injured workers.” MCOs must assist injured workers who have been out of work continuously for three

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<sup>2</sup> American Geriatrics Society. “Beers Criteria for Potentially Inappropriate Medication Use in Older Adults.”

or more years with returning to work for at least 30 days. For 2016 and 2017 the Maximum Target was 26.00%, this has decreased to 4.87% for 2018-2020.

**Wellness.** The wellness indicator rewards MCOs for assisting injured workers in participating in wellness activities when their employer does not already provide a wellness program. The purpose of this is to improve injured worker health in order to reduce time off work in the case of an injury or occupational disease.

As these indicators are relatively new, there is only a small amount of data. Given that this data from such a short time period, and that both the BWC and MCOs have experienced a “learning curve” in setting and meeting benchmarks, current data may not reflect the full capacity of MCO performance, we recommend continuing to collect MCO performance data on these indicators. Audits may be required to make sure that the EPIs are being implemented correctly and reported as anticipated.

Incentive measures may lose their appeal if the requirements become too cumbersome and add to the learning curve. Incentives should continue to be designed to meet specific objectives that ultimately could become adopted as part of routine procedures. Additionally, we recommend that as incentives become routine, they transition to an expectation rather than an incentive. This goes along with the idea that if incentives are successful and meet the objective, then these should become part of the expected medical management in the MCO contract.



## 6 MEASUREMENT OF DISABILITY (MOD) SCORE

This report will provide a comprehensive analysis of the MoD scoring methodology. This analysis will be presented in two pieces: a qualitative analysis portion and a quantitative analysis portion. Together, these analyses will offer a robust picture of the strengths and potential improvement areas of MoD. This understanding of MoD will allow the Ohio BWC to maintain its position as a leader in the workers' compensation industry through its proprietary disability duration measurement by providing evidence for its strengths and by pinpointing possible areas for future improvement. This section will explain the data collection and analysis methods for both the qualitative and quantitative portions of this deliverable.

### 6.1 Qualitative Study Design and Results

Qualitative results reported in this deliverable come from BWC employees and MCO employees, both at the executive/administrative-level as well as the operational and claims-level. MCO and BWC operational staff were asked the same questions to create multiple points of comparison between the two groups. Additionally, executive-level MCO staff and administrative-level BWC staff were also asked many of the same questions for comparative purposes.

We found that all 12 MCOs are well-represented among the MCO operational staff survey respondents. Both the MCO staff survey and the BWC staff survey have appropriate sample sizes and response rates for extrapolation.<sup>3</sup> The survey questions are intended to reveal opinions and perceptions about satisfaction with the MoD score by measuring a single variable with more than one survey question or proposition. The survey also presented an open-ended question on MoD measurement perception, and the responses were coded using a standard qualitative thematic coding method. The qualitative results section shows the analyses of the responses to the MoD score-related questions.

Additionally, we performed further analysis on MoD score approval among MCO claims-level staff stratified by MCO. This was to see if there is a relationship between MCOs who perform well on MoD metrics and MCOs who have claims-level staff who agree that the MoD score is an appropriate measure of medical management activities. This relationship was assessed using Spearman's rho, which is a non-parametric test used to assess the relationship between two variables with a small sample size.<sup>4</sup> Spearman's rho can fall between -1 and 1. The closer to 0, the more likely that there is no relationship between the two variables. The closer to -1 or 1, the more likely there is either a strong negative or positive relationship, respectively. We used Spearman's rho to test our hypothesis that MCOs that perform well on MoD scoring are more likely to have staff that agree that the MoD score is a good indicator of performance. The findings of this analysis are found in the following sections.

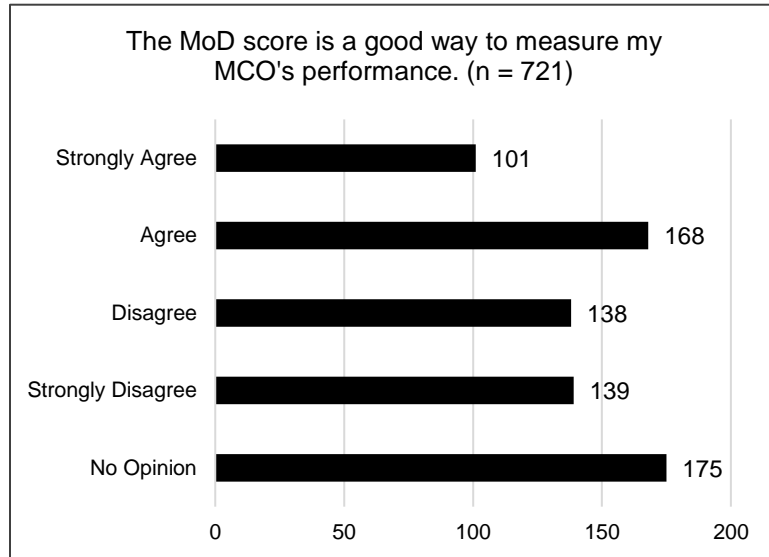
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<sup>3</sup> For more details on these conclusions, see the qualitative study design section in Deliverable 1.

<sup>4</sup> Because the sample size of MCOs is 12, a more traditional test (such as Pearson's r) is inappropriate.

## 6.1.1 MCO Perceptions of MoD

In our survey of MCO claims-level operational staff, we asked to what degree they agree or disagree with the following statement: “The MoD (measurement of disability) score is a good way to measure my MCO’s performance.” When looking at aggregate data (n = 721), 14.01% of respondents strongly agree, 23.3% agree, 19.14% disagree, and 19.28% strongly disagree. 24.27% responded that they have no opinion. In order to further explore the distribution of responses to this statement, we pursued an analysis into a

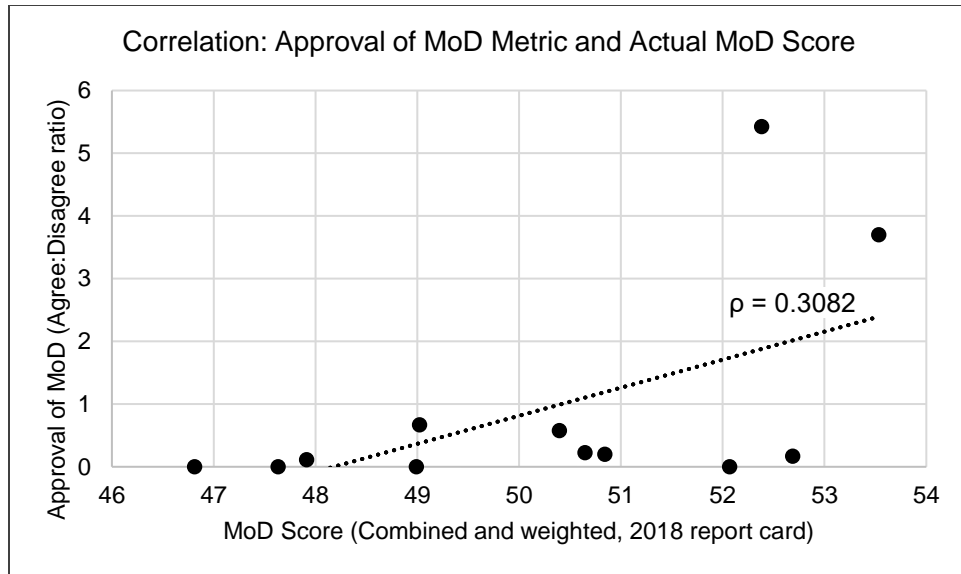


possible relationship between approval of MoD and actual MoD performance. This analysis could tell us if MCOs that perform well on MoD metrics have a higher likelihood to agree that the MoD score is a good way to measure MCO performance than MCOs that do not perform well on MoD metrics.

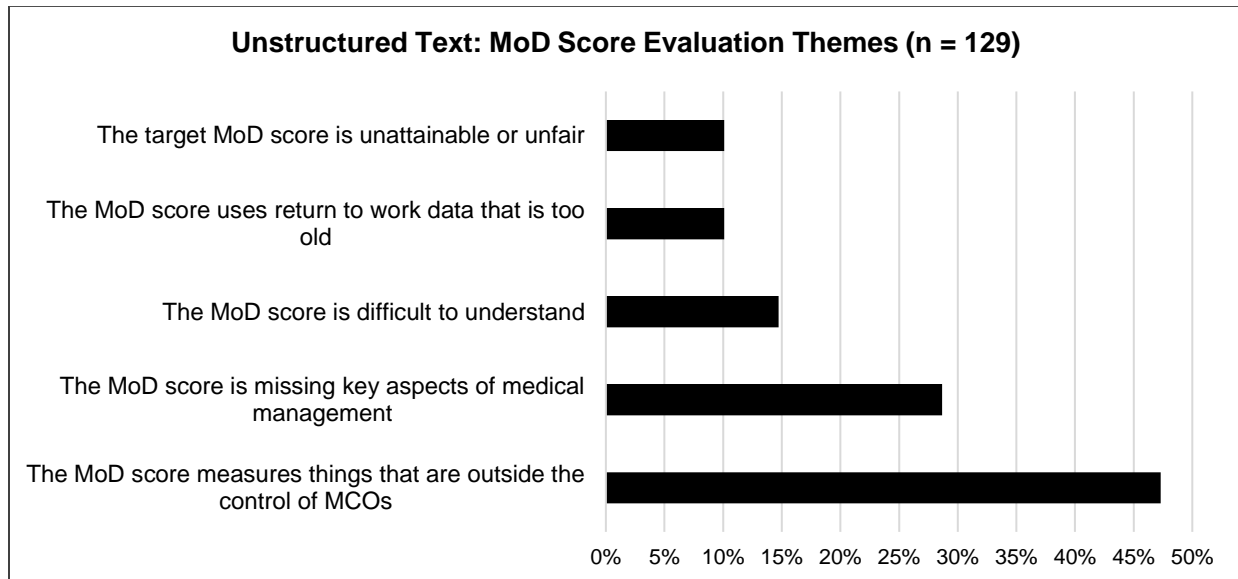
We began by taking composite MoD scores for each MCO based on reported scores in the 2018 MCO report card. These scores were derived by calculating an appropriately weighted average of days absent (weighted at 90%) and recent medical (weighted at 10%) MoD scores. We then calculated agree:disagree ratios for each MCO by dividing the sum of individuals who agree or strongly agree with the MoD approval statement by the sum of individuals who disagree or strongly disagree. This ratio gives us a standardized indicator of the overall level of agreement or disagreement with the MoD score metric for each MCO, controlling for the number of individuals from each MCO who participated in the survey. A ratio less than one means that more respondents disagreed than agreed, and a ratio greater than one means more respondents agreed than disagreed. The closer to 1 a ratio is, the more equally distributed the agreement and disagreement responses are. A ratio of 0 means that no respondents agreed. The following table reports this information.

MCO	MoD Score (2018 report card)	Agree:Disagree Ratio
1-888-OHIOCOMP	50.648	0.2254
3-hab, Ltd.	50.843	0.2000
AultComp	52.687	0.1667
CareWorks	52.381	5.4231
Comp One	48.991	0.0000
CompManagement	50.396	0.5797
Corvel	47.632	0.0000
Genex	46.813	0.0000
HMS	53.532	3.7000
OHL	52.068	0.0000
Sheakley UNICOMP	49.023	0.6667
Spooner MAI	47.913	0.1111

We then used this information to calculate a correlation using Spearman's rho ( $\rho$ ). This calculation can tell us how close the relationship is between the actual MoD score and the agree:disagree ratio. We found that  $\rho = 0.3082$ . This denotes a moderate, positive relationship between calculated MoD score and MoD score metric approval. In short, as an MCO's MoD score increases, its staff members are moderately more likely to agree that the MoD score is a good measurement of an MCO's performance. The following scatterplot illustrates this correlation.



In addition to this analysis, we also looked at unstructured text responses and coded them using industry standard qualitative coding methods in order to look for common themes among responses. Among those responses which contained a critical evaluation of the MoD score metric, the following are the most salient themes and the rate at which they occur in the text data:<sup>5</sup>

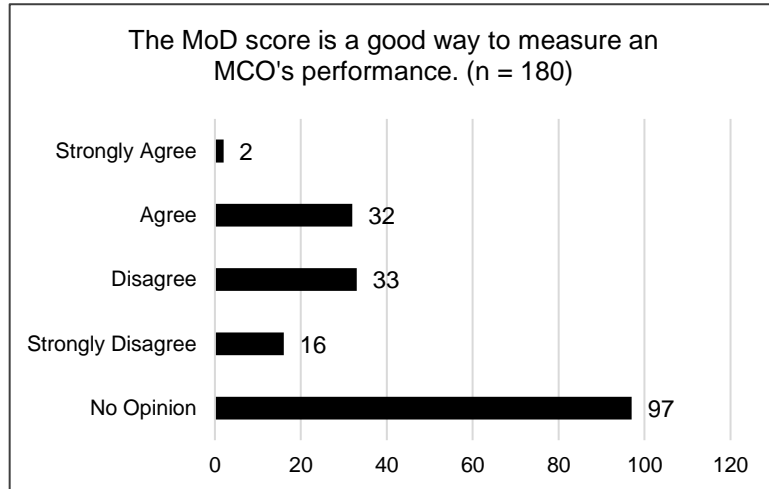


It is important to note that while these themes come from 17.43% of total MCO staff survey respondents, they still represent insights worth exploring.

<sup>5</sup> These percentages do not add to 100% because one response can contain more than one theme.

## 6.1.2 BWC Perceptions of MoD

BWC staff members were also asked about their opinions on the MoD scoring metric. Similar to MCO staff, they were also asked to report the extent to which they agree or disagree with the statement, “The MoD score is a good way to measure MCO performance.” Over half (53.89%, n = 180) had no opinion. Of the remaining participants, 1.11% strongly agreed, 17.78% agreed, 18.33% disagreed, and 8.89% strongly disagreed. In unstructured text responses to an open-ended question about possible criticisms of the MoD score, we uncovered three key themes using qualitative coding methods. They are as follows:



- *Narrow focus:* Many respondents are concerned that the MoD metric only incentivizes MCOs to focus on those cases for which return to work is possible at the expense of cases which will not increase the MCO's MoD score.
- *Incentivizing expected service:* Some respondents are unsure as to why MCOs are being incentivized on top of base payments for providing the work they are already contractually obligated to do.
- *Not comprehensive:* Some survey participants reported that they believe the MoD score does not adequately take into account certain variables which affect return to work efforts but are outside an MCO's control.

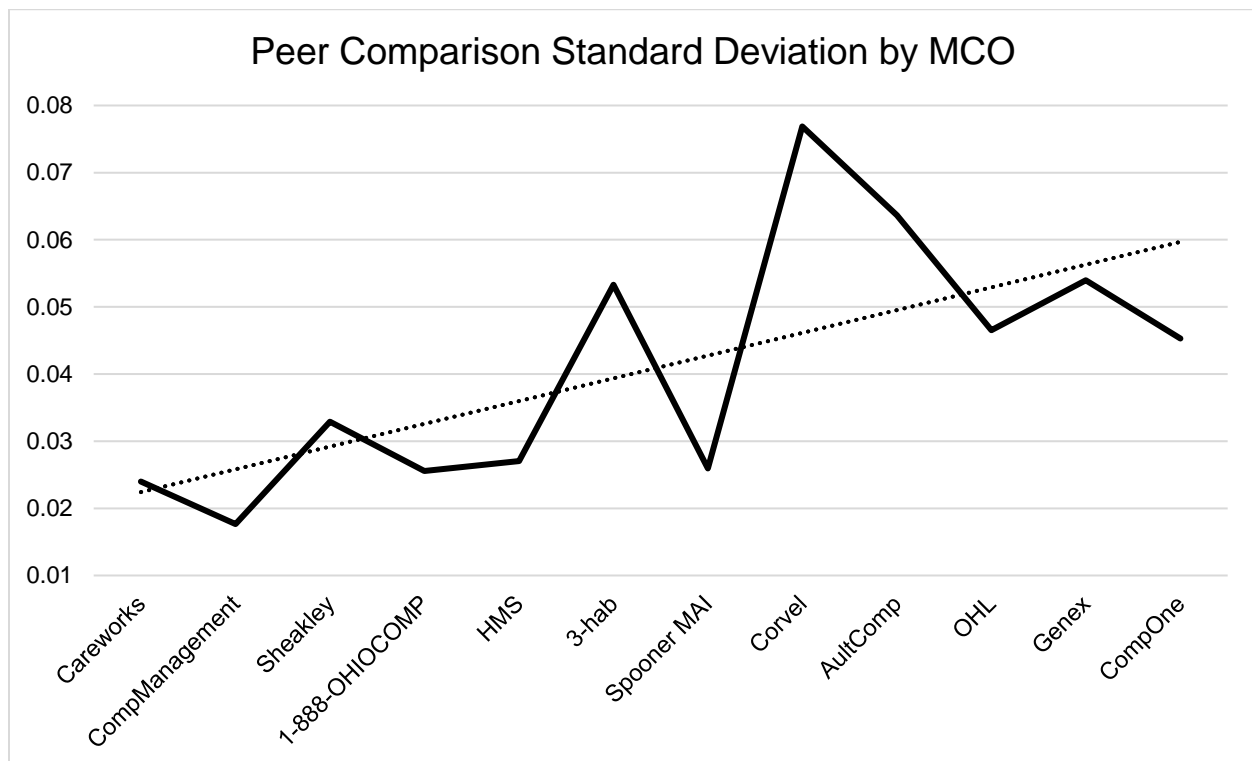
## 6.2 Variability of MoD Scores

Based on observed data, we can see patterns of variability among MoD scores: MCOs with fewer claims tend to have greater variability in their MoD score, while MCOs with more claims have less variability. Variability refers to the degree to which points within a group of data diverge from the mean. An MCO which has volatile, unpredictable MoD scores every quarter would have very high variability; an MCO which has the same MoD score every quarter would have very low variability. We see evidence for this by looking at the variability of the peer comparison of each MCO's quarterly days absent MoD performance and the respective rates of change. The peer comparison is a ratio of an MCO's actual MoD score to their target MoD score. We can use the peer comparison for each quarter to see a normalized reporting of how well an MCO does at meeting their target score. A peer comparison of less than one means the target score was not met, a score of one means it was met exactly, and a score greater than one means it was exceeded. The following table shows the differences in variability among

high-volume MCOs and low-volume MCOs using peer comparison data from the 3<sup>rd</sup> quarter of 2014 to the 4<sup>th</sup> quarter of 2017. Standard deviation (abbreviated st. dev. in the table) is used here as a measure of variability. The lower the standard deviation, the less variability in the data. The higher the standard deviation, the more variability in the data.

	MCO	Mean	St. Dev.
High-Volume	Careworks	0.995	0.024
	CompManagement	1.007	0.018
	Sheakley	0.990	0.033
	1-888-OHIOCOMP	1.029	0.026
Mid-Volume	HMS	0.946	0.027
	3-hab	1.006	0.053
	Spooner MAI	1.103	0.026
	Corvel	0.941	0.077
Low-Volume	AultComp	0.933	0.064
	OHL	1.034	0.047
	Genex	0.974	0.054
	Comp One	1.000	0.045

In the table above, we can see that even though the mean peer comparison scores do not correlate with the claim volume of an MCO, the standard deviation does. The following chart illustrates this correlation:



This graph shows that there is a positive linear correlation between claim volume of an MCO (Careworks with the highest claim volume on the far left and Comp One with the lowest claim volume on the right) and standard deviation of peer comparison scores. This means that low-volume MCOs are in fact statistically significantly more likely to have variability in their MoD scores.

We attribute this difference in variability to the potential for claims with anomalously low or high scores to have a greater impact on low-claim volume MCOs than on high-claim volume MCOs within a single-quarter period. This has two key implications. First, it means that low-volume MCOs are less able to forecast their MoD scores than high-volume MCOs. Second, it means that a single anomalous claim has a greater impact (positive or negative) on a low-volume MCO than it does a high-volume MCO.

It is important to keep in mind that variability is expected and is not, in and of itself, an issue. It is expected that an MCO will meet their goal some quarters and fall short of or exceed their goal in other quarters. However, the concern lies in the disparity in variability among MCOs. This creates unequal market competition because a single claim has the capacity to have more of a detrimental impact on a low-volume MCO than the same claim on a high-volume MCO.

Based on our analysis of MoD, we've found that it contains the appropriate level of sophistication and complexity to provide an accurate indicator for an MCO's ability to provide satisfactory medical management services for injured workers and employers. We do not recommend an overhaul of MoD. However, we believe that there is opportunity for improvement in how the MoD score results are communicated with the MCOs and payments calculated, which shifts the focus from short term actions to long term investments.

Currently, MCOs are paid for their performance in their quarterly MoD score, which is calculated according to the individual claim MoD scores from claims scored in the previous four quarters. An MCO can earn the exact amount of their available outcome payment, they will earn less if they fall short of their target MoD score, and they will earn more if they exceed their target MoD score. The logic behind this is that incentivizing high-performing MCOs and withholding money from low-performing MCOs will encourage all MCOs to continue improving their performance. Additionally, the current method of competitive payments encourages competition among MCOs while still maintaining cost-neutrality; high-performing MCOs can earn extra money for high performance at no extra cost to the state.

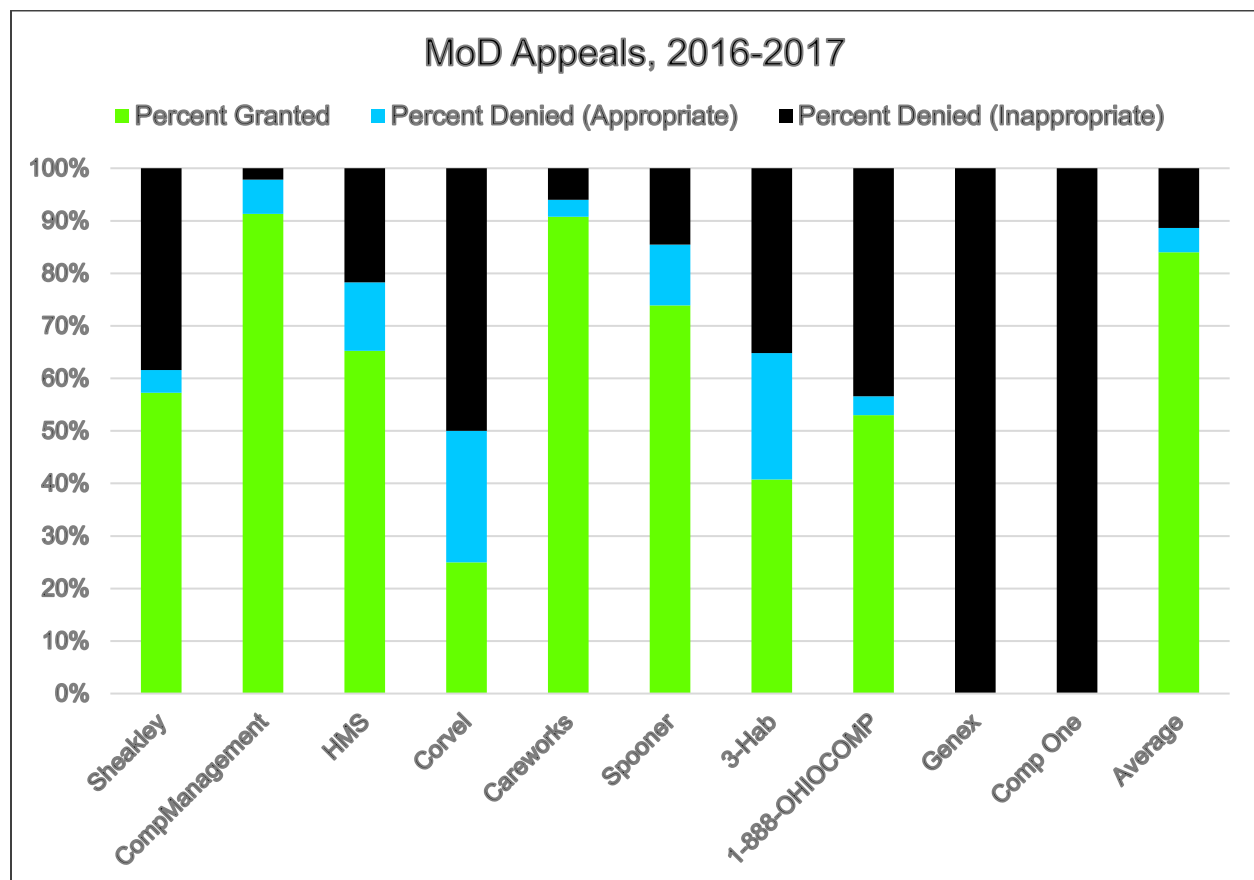
We recommend a change in calculation in order to normalize the MoD-based payment methodology using a moving average of four quarters. A moving average model takes into account MoD scores from the past four quarters and therefore reduces the quarter to quarter variability in payment. Incorporating additional quarters into the payment calculations lessens the impact of outliers, which is most beneficial for smaller MCOs, where a few outliers can influence their score for a given quarter. For larger MCOs, while the rate of outliers is similar, the large claim volume evens out the variability quarter to quarter. A moving average model enables better predictability into MoD score payments and reduces the impact of outliers, which protects market competition by ensuring MCOs can compete on a level playing field, allowing a shift from a focus on reducing the impact of outliers to reducing days absent and recent medical.



Insight into future performance payments allows the MCOs to better focus on long term strategies that benefit injured workers instead of an emphasis on short term wins. We recommend that the moving average model be considered for the proposed improvement incentive payment.

## 6.3 Appeal Process

As per the MCO contract (Appendix E), MCOs are given the opportunity to appeal MoD scores for a variety of reasons, including (but not limited to) BWC failure to update correct information in PowerSuite or to account for periods of compensation ineligibility due to specific circumstances. An appeal may either be granted or denied. Denied appeals can also be deemed “inappropriate,” meaning they are being appealed for a reason found on a specific list of unappealable issues. The following chart shows the percentage of granted, denied and appropriate, and denied and inappropriate appeals among all MCOs submitted appeals from 2016 to 2017.



On average, appeals are granted 84% of the time, denied 16% of the time, and deemed inappropriate 11% of the time. Additionally, four of the MCOs in operation during 2016 or 2017 submitted no appeals. Given how often appeals are granted, we recommend keeping the

appeals process. However, reviewing denied and inappropriate appeals represents a significant time burden to the BWC. As recommended in Deliverable 4 (Assessment of Current MCO Payment Methodology), an increase in financial penalties for inappropriate appeals should act as a deterrent for inappropriate appeals.

## 6.4 MoD Comparison to ODG

The impact of skillful and efficient medical management of work related musculoskeletal injuries has the potential to yield great benefit to the MCO environment and BWC stakeholders. The injuries studied here represent three of the most common injury categories encountered in the workers compensation system<sup>6</sup> and are among the most expensive claim types.<sup>7</sup>

The Work Loss Data Institute's Official Disability Guidelines (ODG) are a nationally recognized set of guidelines used to inform the multiple stages of claim medical management and return to work. Although Ohio employs the ODG to provide guidance for claim utilization review, ODG also offers an evidence-based return to work tool designed to forecast time away from work for claims<sup>8</sup>. The ODG return to work guidelines are not currently employed in Ohio to evaluate anticipated time away from work for injured workers. Instead, Ohio has created an algorithm, termed the measurement of disability (MoD), to calculate the expected duration of disability. The MoD uses historical data from the state to predict the time away from work for similar claims. Similarity, in this case, is determined by diagnosis, employment type, and injury severity. BWC has described the algorithm in detail in the MCO contract, as it is the basis for evaluating MCO performance on measured outcomes.

In order to focus our analysis specifically on the ability of MoD to be an accurate predictor of days absent, our analysis was limited to the population of claims with greater than seven days of absence, termed lost time claims. Episode analysis enables a system-wide performance "stress test": By excluding medical only claims and focusing on lost time, musculoskeletal injuries, the analysis examines MCO performance specifically using claims that require fastidious medical management and return to work oversight. Consequently, the injured worker outcomes data may appear worse than what would otherwise be obtained if examining average values for all claims, but the results permit evaluation of performance under conditions that are truly a test of MCO skill and value. The goal of this portion of the report is to compare the method used in Ohio for predicting disability duration, to a nationally recognized standard, the Official Disability Guidelines (ODG).

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<sup>6</sup> Mitchell et al., "Shoulder Pain."

<sup>7</sup> Mroz et al., "Frequency and Cost of Claims by Injury Type from a State Workers' Compensation Fund from 1998 through 2008."

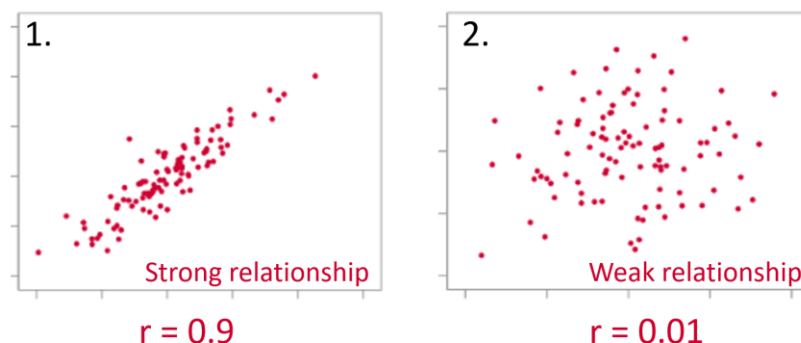
<sup>8</sup> Shetty et al., "Evaluation of the Work Loss Data Institute's Official Disability Guidelines."

In order to evaluate the strength of the current MoD method of evaluating duration of disability, Ohio BWC claims were examined to compare both the MoD and ODG to the actual number of days an injured worker was absent.

For this report, return to work profiles of the three episodes were compared over time, to each other and at specific time points following the injury. Each claim was evaluated in terms of the actual number of days absent vs. the return to work evaluations of the same claim made using either MoD or ODG. The goal of this analysis was to determine which metric correlates most strongly with actual observations of disability duration.

The analysis was conducted using allowed/valid, lost time claims for back, knee and shoulder injury episodes occurring between 2012 and 2017. Claims for which the injured worker had not yet returned to work (reported date of return to work [RTW] = 'null') and claims without a reported MoD score were removed from the analysis. For the remaining claims (n= 12,780) we measured the number of work days missed in the 365 days following the injury and compared this value to the values obtained for the same claim when evaluated using either ODG or MoD. For comparisons of each RTW measurement value, data was scaled using quantile normalization to preserve distribution and rank on a 0-100 scale. Pearson correlation coefficients were calculated to compare the strength of relationship between measured days absent (DXC measured) vs. either MoD or ODG RTW value for the same claim. The Pearson correlation coefficient is used to measure the strength of a linear association between two variables, where the value  $r = 1$  means a perfect positive correlation and the value  $r = -1$  means a perfect negative correlation and  $r = 0$  indicates no relationship between the two variables.

The image to the right provides a graphical representation of strong vs. weak relationship between two variables. Using this analytical method, a strong relationship between an RTW evaluation measurement and DXC measured absent days would look like image 1 in the figure. Conversely, a weak relationship would resemble image 2.



*Example scatterplots demonstrating strong or weak relationships between two variables.*

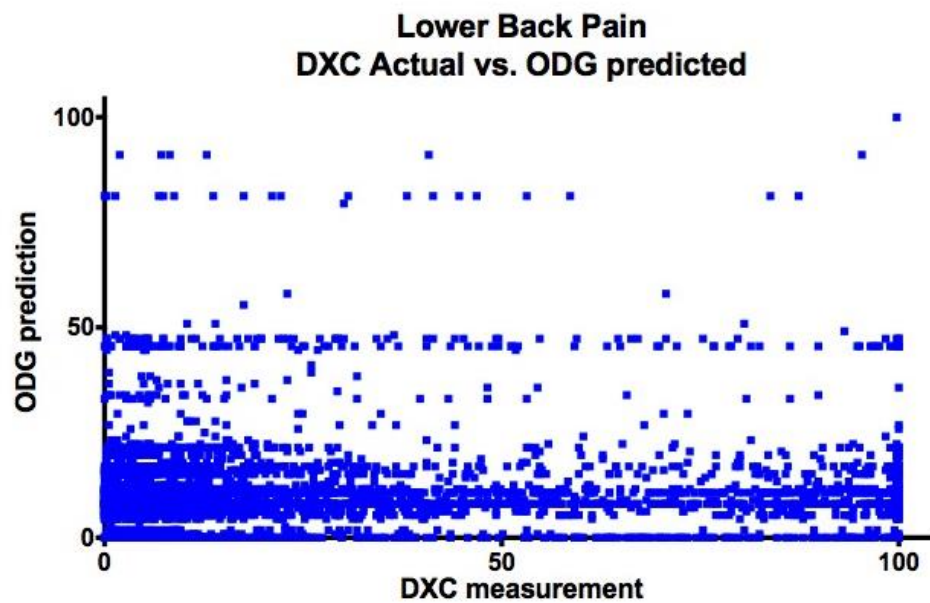
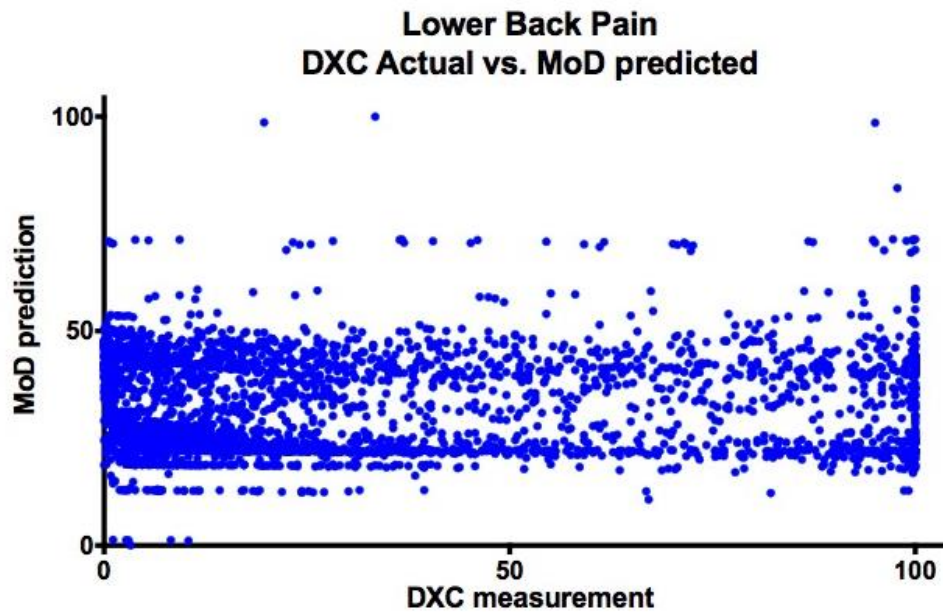
The results of this analysis are presented below, organized by episode type. For each episode, figures are shown demonstrating:

1. Scatterplot of the relationship between the MoD score and the DXC measured 1-year absence.
2. Scatterplot of the relationship between the ODG best practice RTW Prescription for that claim and the DXC measured 1-year absence.

3. Summary statistics for the episodes correlation analysis demonstrating the strength of each relationship as compared to the strength of a positive control in which BWC-reported absent days are compared to DXC calculated absent days (“DXC measured one year absence days vs. BWC measured days absent”).

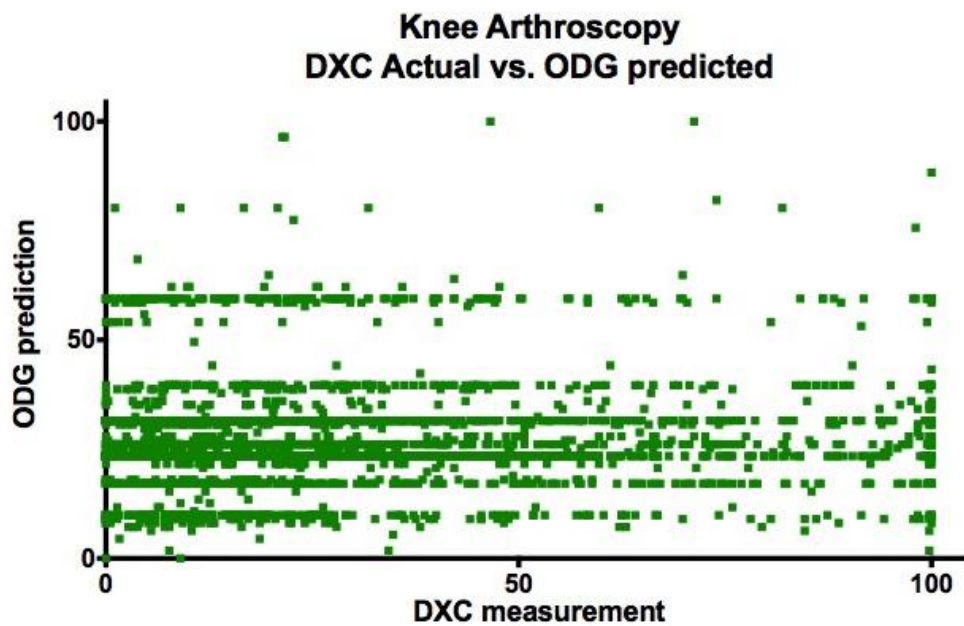
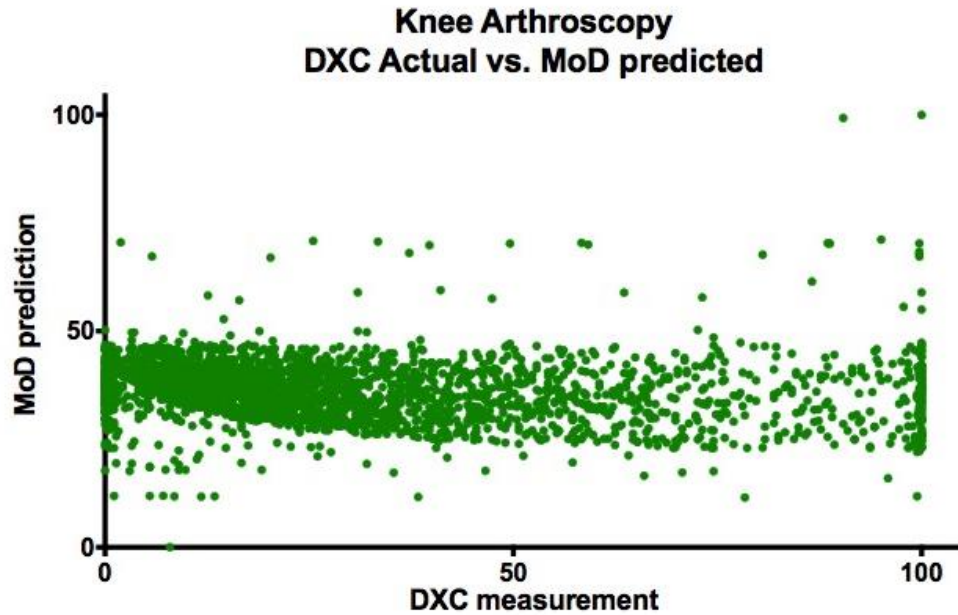
In all three analyses, the strength of the relationship between the tested model and the observed measurement is moderate but significant. However, the strength of the relationship between the measured number of days absent and the MoD score is stronger than the relationship between the ODG-predicted number of days absent and the measured number of days absent, indicating that the MoD metric is more accurately aligned with actual absence than the ODG RTW. The below comparisons represent MoD scores as compared to ODG best practice RTW predictions. The findings were replicated using data sets composed of claims within matched quartiles of severity (25<sup>th</sup>, 50<sup>th</sup>, 95<sup>th</sup>).

### 6.4.1 Lower Back Pain



		DXC measured one year absence days vs. ODG bp	DXC measured one year absence days vs. BWC measured days absent	DXC measured one year absence days vs. MoD score
Pearson r	r	0.07074	0.5666	0.1724
	95% confidence interval	0.04287 to 0.09849	0.547 to 0.5855	0.1451 to 0.1993
	r-squared	0.005004	0.321	0.02971
P value	P (two-tailed)	<0.0001	<0.0001	<0.0001
	P value summary	****	****	****
	Significant (a =.05)	Yes	Yes	Yes
Number of xy pairs		4918	4791	4918

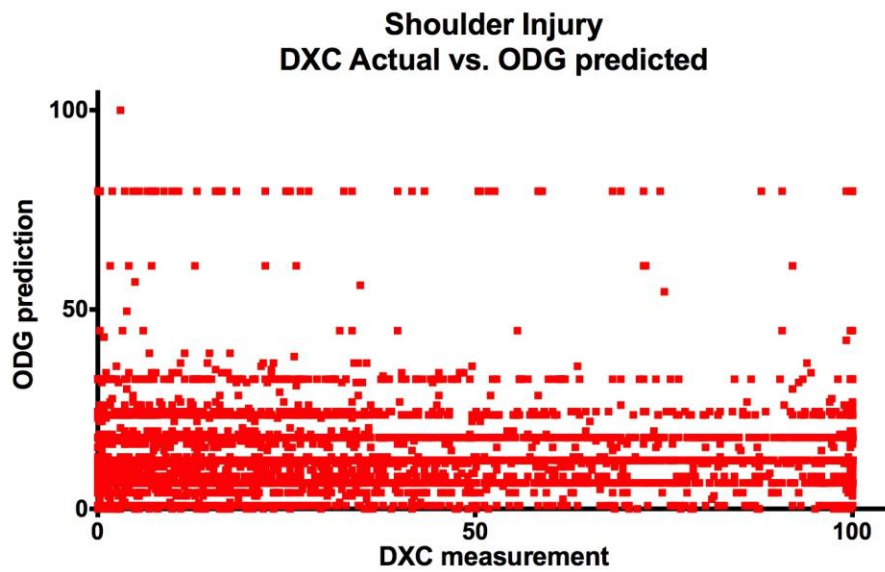
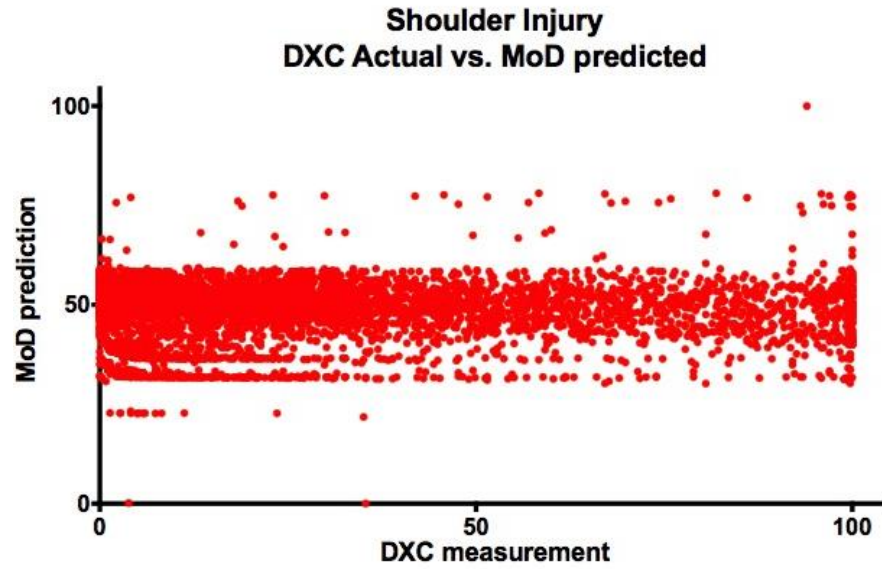
## 6.4.2 Knee Arthroscopy



		DXC measured one year absence days vs. ODG bp	DXC measured one year absence days vs. BWC measured days absent	DXC measured one year absence days vs. MoD score
Pearson r	r	0.04868	0.4305	-0.1273
	95% confidence interval	0.01241 to 0.08483	0.4002 to 0.4599	-0.1629 to -0.09147
	r-squared	0.00237	0.1853	0.01622
P value	P (two-tailed)	0.0086	<0.0001	<0.0001
	P value summary	**	****	****
	Significant (a =.05)	Yes	Yes	Yes
Number of xy pairs		2916	2863	2916



### 6.4.3 Shoulder Injury



		DXC measured one year absence days vs. ODG bp	DXC measured one year absence days vs. BWC measured days absent	DXC measured one year absence days vs. MoD score
Pearson r	r	0.03843	0.462	0.08138
	95% confidence interval	0.01108 to 0.06573	0.4398 to 0.4836	0.05413 to 0.1085
	r-squared	0.001477	0.2134	0.006622
P value	P (two-tailed)	0.0059	<0.0001	<0.0001
	P value summary	**	****	****
	Significant (a =.05)	Yes	Yes	Yes
	Number of xy pairs	5129	4941	5129

#### 6.4.4 Conclusions

The strength of the relationship between the tested models and the observed measurement is moderate but significant for both ODG and MoD. However, for shoulder injuries, low back pain, and knee arthroscopies, the strength of the relationship between the measured number of days absent and the MoD score is stronger than the relationship between the ODG-predicted number of days absent and the measured number of days absent. In short, for all three episodes, both MoD and ODG are correlated with actual duration of absence, but the MoD metric is more accurately aligned with actual absence than the ODG RTW in all three episodes.

## 6.5 Comparison of Evaluation Methods

The BWC Measurement of Disability (MoD) is currently the primary outcome performance measurement employed in Ohio to evaluate an MCO's ability to medically manage claims and impact the duration of injured worker disability. The MCO performance measures encompassed within the MOD score (days absent and recent medical) are also communicated to employers in the annual MCO report card. The final section of this report will seek to build upon study findings reported here and in Deliverable 1, to test and evaluate potential methods to strengthen measurements evaluating MCO outcome performance.

Above, DXC evaluated the MoD in terms of accurate prediction of observed duration of disability as compared to the Official Disability Guidelines (ODG) return to work prescription. This analysis determined the MoD Score to be more closely aligned with actual injured worker outcomes in Ohio than the ODG RTW metric.

In Deliverable 1 of this study, MCO performance was evaluated in terms of cost, quality and return to work outcomes. The analysis used episodes of care that represent common workers' compensation injuries and was designed to create an analytical 'stress test' of medical management by specifically focusing on lost time claims. The results of these analyses demonstrated that over the past five years there has been excellent progress in medical cost containment and progress in episode quality metric performance but that there has been an increase in the average duration of injured worker absence for lost time claims.

It is clear that the MoD is a valuable tool, both for BWC evaluation of MCO performance and for communication of performance externally. Having measured the trends in outcomes over time and compared the accuracy of MoD to a national comparator, the final section of this deliverable will compare the BWC-reported evaluation of MCOs to the DXC-calculated performance of MCOs in terms of their relative rankings in two primary outcomes encompassed within MoD: medical cost and duration of absence. This section will also seek to test potential opportunities to strengthen or complement the functionality of these existing performance measures.

The table below shows the average of MCO performance rankings in 2016 using the three episodes of care created for this report. All calculated rankings represent average rankings for all MCOs, across all three episodes, for MCOs with  $\geq 10$  valid episodes in the year 2016. As with previous analyses, although 2017 data was available, 2016 data was employed for this comparison due to concerns about the maturity of return to work data from claims in 2017.

Each output category from the created episodes was arranged and ranked relative to peer MCOs in the same category. Episode volume ranking is included for reference but is not included in reported overall average rank. Volume represents the total number of all three episode types included in the dataset (all valid, lost time claims with injury occurrence date in 2016). MCOs with the highest volume of episodes are ranked first (1) for episode volume.

Subsequent rankings were conducted using ascending or descending rank values as appropriate depending on the outcome values (more desirable outcome = 1, least desirable outcome ranked highest). For example, DXC episode-calculated 1-year total days absent values were arranged in ascending order for each episode type, placing the MCO with the lowest average days absent ranked first (1) and the MCO with the highest average days absent ranked last (15). Variables representing outcomes with opposite (higher) optimal values were arranged

in the reverse orientation such that all episode outputs were ordered and ranked with the most desirable outcome ranked in first place. Outcome rankings were then averaged across all episodes and categories represented in the table below.

2016 All MCOs, All-Episode Average MCO Ranking relative to peers in DXC Episode Measurements	Average Rank:  Episode Volume *	Average Rank:  QM performance	Average Rank:  Medical Spend	Average Rank:  1 Yr. Absent Days	Average Rank:  1 yr. TT/LM Indemnity Spend	Total Average**  (excludes episode volume)
1-888-OHIOCOMP	4.00	8.49	4.67	3.33	4.67	5.29
3-HAB, LTD.	6.33	7.08	12.67	8.00	5.00	8.19
AULTCOMP	8.67	7.25	6.67	4.33	4.67	5.73
CAREWORKS	1.00	9.18	6.33	8.33	10.33	8.55
COMP ONE, LTD.	13.33	6.50	9.33	12.33	6.67	8.71
COMPMANAGEMENT	2.00	8.29	11.00	6.33	5.67	7.82
CORVEL OHIO	9.33	5.20	9.33	7.67	7.67	7.47
GENEX	14.67	5.90	14.67	14.67	10.00	11.31
HEALTH MGT. SOLN	5.00	9.22	9.33	6.67	8.00	8.31
OCCUPATIONAL HEALTH LINK	11.33	6.46	3.33	11.67	7.33	7.20
SHEAKLEY UNICOMP	3.00	9.89	9.67	7.33	10.67	9.39
SPOONER MEDICAL	6.67	6.39	6.67	5.67	11.33	7.51
THE HEALTH PLAN	13.00	3.73	5.00	10.00	11.33	7.52
UNIVERSITY HOSPITALS	10.00	4.51	3.67	4.67	7.00	4.96
WORKSTAR HEALTH SERVICES	10.67	6.60	7.67	9.00	9.67	8.23

**Episode Measurements- Average MCO Rankings for all episodes in 2016:** Data represent the average of MCO ranking (relative to peers) in terms of five categories of episode outcomes: episode number, quality metric outcomes, medical spend, days absent and 1 year TT/LM indemnity spend. For episode volume, lower values correspond to higher episode volume, for all other metrics lower values corresponds to the best performance in that metric. Data are aggregate averages across back, knee and shoulder episodes representing all valid, lost time episodes with injury occurrence date in 2016

The data presented in the above table and associated graphs below represent two methods that we hypothesized could complement the existing performance evaluation measurements of MCOs.

These are:

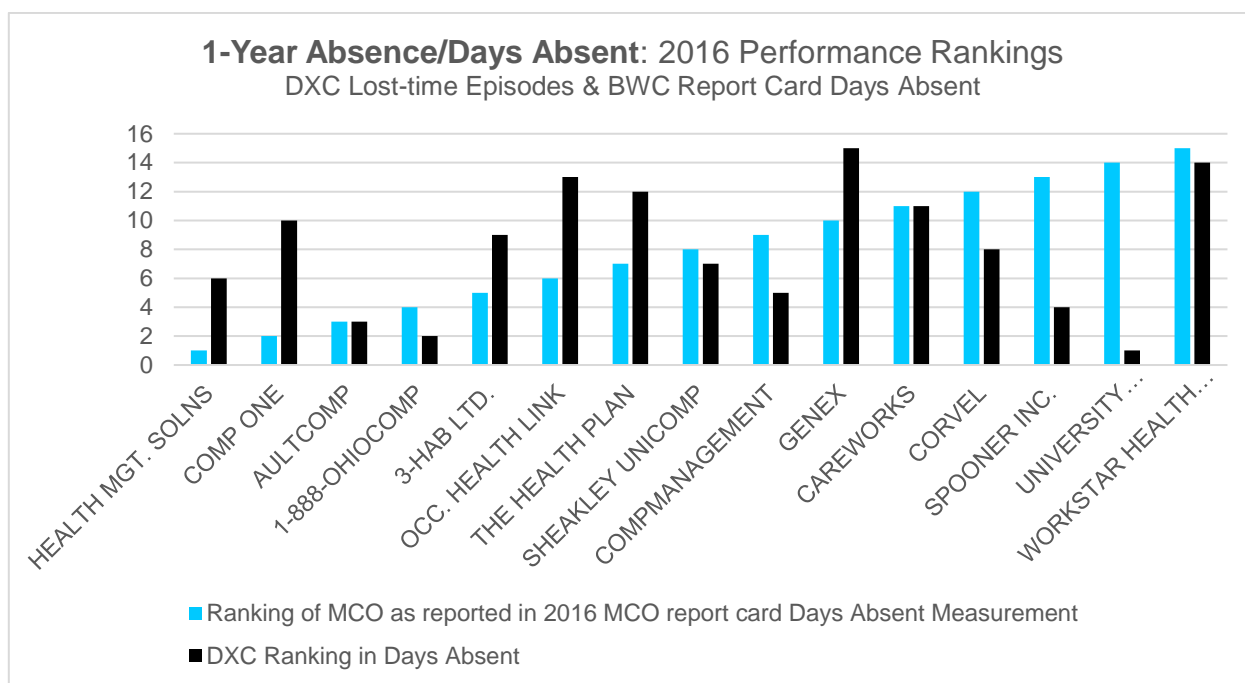
- 1) Ranked performance evaluations
- 2) Augmenting the current method of MCO performance evaluations using a snap-shot of high risk claims and incorporating an evaluation of specific measures of quality.

**Ranked Performance evaluations:** One method that DXC tested for consideration is the documentation of performance through a relative ranking methodology among MCOs. The primary strength of this method is its simplicity and provision of a clear, concise method for communication of performance. Based on feedback from employers surveyed for this study, it is

possible that such a ranking method would be helpful. Among employers who provided suggestions who they felt could improve the process of MCO selection, 28% expressed encountering challenges in evaluating MCO performance, citing difficulty in obtaining information that they considered to be understandable, reliable, and/or applicable. The 2018 MCO report card, released while this study was in progress, reflects updates and visualizations that are likely to aid in this process.

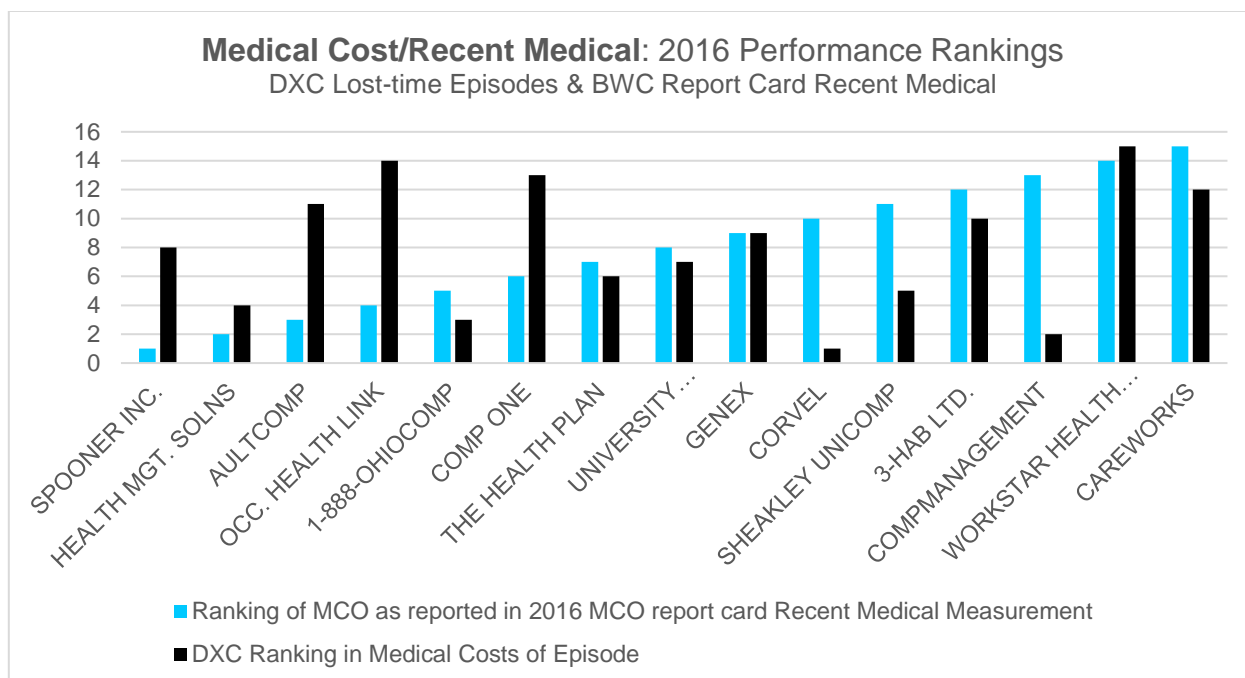
The primary disadvantage of a single digit rank is the risk of oversimplification at the expense of interpretation. For example, the existing BWC report card reports actual scores for days absent and recent medical. The advantage of the existing BWC method over the tested simplified ranking method is that it permits the reader to see minimal performance differences that are obscured in a ranking system. For example, the 4<sup>th</sup> and 5<sup>th</sup> best performing MCOs in the 2016 days absent measure were separated by only 0.27 points. Both performed above the statewide average (104.7% and 104.1% respectively).

. Recent changes MCO report card were adopted in 2018 that are likely to aid in interpretation of the report card data. These changes include improved data visualizations and additional supporting detail in text explanations of data interpretation. Although the existing methods of outcome performance evaluation and reporting could be complimented with a performance ranking model, based on shortcomings of the ranking system and potential impacts of revisions to report cards, we recommend re-evaluation of this method following the next employer satisfaction survey.



*Data represent relative ranking of MCO performance when comparing selected claim types and medical conditions included in DXC episode analysis to overall outcome performance metrics reported on MCO report card.*

*Note: Claim populations are different between the two measurements.*



*Data represent relative ranking of MCO performance when comparing selected claim types and medical conditions included in DXC episode analysis to overall outcome performance metrics reported on MCO report card.*

*Note: Claim populations are different between the two measurements.*

**Augmenting current method of MCO performance evaluation with performance results obtained for high-impact claims and incorporating evaluation of specific measures of quality.** Similar to the results obtained in deliverable 1, the outcomes of analysis conducted using episodes of care for lost time claims is not identical to the results obtained for all claims. The graphs above represent a comparison of the results obtained from the episode-based ranking methodology as compared to the relative performance rankings obtained from MCO performance outcome metrics calculated from all claims and conditions (data reported on the 2016 MCO Report Card included in appendix)

It is important to note that these two evaluations are comparable only in the fact that they are methods designed to clearly communicate performance data on medical costs and duration of absence. Otherwise they are very different: they include different populations of claims and employ different calculation methods. While the MCO report card data represent all medical conditions and claim types (both lost time and medical only), DXC performance rankings represent three medical conditions for lost time claims only. For this reason, these comparative analyses are intended to represent a proof-of-concept only: Performance evaluations conducted on lost time claims can differ from performance on all claims. While both claim types are important, there is potential value and different insights that can come from evaluating performance on a snap-shot of specific high-impact claims.

While it is important to monitor overall performance in claim medical management overall, MCO outcomes in medical management of higher-risk claims could provide meaningful

supplementary information. It is possible that a focused snap-shot of performance on high-impact claims and conditions could serve as a complimentary performance measure to provide insight into MCO performance on specific claims. Episode-based data could describe MCO performance on selected, high-risk conditions.

When performance is measured using specific medical conditions, MCO performance evaluation can incorporate measures of adherence to known clinical best practice guidelines, such as those built into the episodes designed. Alternatively, the widely used set of managed care industry performance measures known as HEDIS or Healthcare Effectiveness Data and Information Set is an alternative set of quality measures that could be incorporated.

When evaluation is focused on lost-time claims only, additional attention is placed on the highest risk claims. Ultimately, when evaluation of 1-year days absent and quality metric performance is conducted as an aggregate of medical and indemnity spends, MCO relative performance appears differently than when performance is evaluated overall, providing increased visibility into differences in cost and quality.

## 7 EXECUTIVE SUMMARY

Currently, MCOs are measured on their overall ability to ensure timely return to work for injured workers. However, as this deliverable and the results of deliverable 1 have shown, there is value in evaluating groups of claims separately. When looking at overall claims separately from lost time only claims, we can see two different stories. We can observe that MCOs have increased return to work timing on lost time claims even though return to work timing has improved in the claim population overall. Section 6.6.1 will detail our recommendation for measuring lost time claims separately from medical only claims.

Ohio has previously led the way in terms of innovative mechanisms to aid injured workers and employers. Although the other deliverables in this report have demonstrated success and seemingly continual improvement in quantifiable metrics, the return to work rates as reported here have not had the same level of success. In order to adequately respond to these concerns while minimizing the possibility of negative consequences for stakeholders, we recommend that the BWC consider the following changes to the performance evaluation metrics currently in place to measure MCO performance.

1. Maintain the calculation methodology of MoD
2. We recommend that the moving average model be considered for MoD-based payment
3. Update diagnosis coding used for MoD calculations from ICD-9 codes to ICD-10
4. Update the benchmark data used for evaluation of claim duration and diagnosis severity  
*Note: BWC report that this process is currently in progress at the time of writing this report.*
5. Consider including metrics for additional measurements to evaluate one year and/or cumulative number of absent days.
  - One possible shortcoming of the MoD is the fact that there is insufficient focus on the cumulative total number of absent days missed in a year or over the life of the claim. Instead the evaluation is based upon the number of days missed in the most recent performance measurement period. Therefore an injured worker who has repeated absences may not impact an MCO's MoD score, as long as those absent days occur in separate measurement periods.
    - **Implementation suggestion:** Create a score and reward (or penalize) thresholds that evaluate both the ratio of days absent relative to days elapsed since the injury and actual RTW as well as the number of repeated absences.
    - **Stratification of medical only and lost time claims:** In addition to the current system of calculating the MoD score for claims overall, MoD scores could be calculated for claims according to type. This would provide greater visibility into trends in RTW for claims of each type.



## **7.1 Opportunities for resetting the strategic administrative focus of MCOs**

MCOs have missed the opportunity to take advantage of their internal and external resources through demonstration of exceptional capacity in a complex and flexible system. Although the evidence presented herein indicates that MCOs are positively impacting procedural and transactional management of claims, they are falling short of demonstrating similar success in return to work. Because lost time claims are the minority of total claims in the system, this discrepancy is not immediately obvious when looking at averages of performance data on both claim types. To increase MCO focus on improved RTW performance and achieving sustained success in this regard, MCOs should separate medical only claims from lost time claims – both for reporting to employers and for administering outcomes payment.

We suggest the following:

- For the purposes of outcome payments, separate medical and lost time claim populations and pay rewards in proportion to each claim type's relative, cumulative financial impact (medical and lost time) on the system overall.
- Report MCO performance and competitive ranking in medical management and return to work for both lost time and medical only claims to employers in annual report cards.
- Separation of the 80% of claims that are artificially bolstering MCO MoD performance statistics would emphasize the importance of performing well in each claim type subset.
- MCOs should approach RTW efforts as a competitive opportunity to bring their industry expertise, resources and innovative concepts to the table. Focusing on injured worker-centric endeavors to provide resources, care and holistic rehabilitation to expedite IW recovery and gain employer involvement.
- Data stratification to highlight MCO performance on specific claim types could create an environment in which exceptional performance in this regard would be beneficial to MCOs and encourage continuous improvement.

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# **Deliverable 4**

**DXC report for The Ohio Bureau of Workers' Compensation  
Managed Care Organization Impact Study**

RFP DABWC-18-EP-002

12<sup>th</sup> December, 2018



## **Deliverable 4: Assessment of the Current MCO Payment and Incentive Methodology**

# 1 EXECUTIVE OVERVIEW

<b>Deliverable 4</b>	<b>Assessment of the current MCO payment and incentive methodology including:</b> <ul style="list-style-type: none"> <li>• <b>Comparison of Ohio’s approach to industry standards.</b></li> <li>• <b>Identifying areas of improvement opportunities.</b></li> <li>• <b>Providing appropriate recommendations and strategy to achieve implementation of recommendations to current methodology.</b></li> </ul>	<b>RFP DABWC-18-EP-002</b> <b>P. 15</b>
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Ohio’s Bureau of Workers’ Compensation (BWC) has maintained a system in which contracted Managed Care Organizations (MCOs) are compensated according to their activities and performance, as measured both by process and outcome indicators for claim and medical management services. An ideal payment methodology for reimbursing these services would provide adequate and appropriate financial incentives for MCOs to meet the goals and standards of the HPP. Ohio’s workers’ compensation system is unlike that of other states in a number of key aspects, including the combination of a monopolistic state fund and the contracting of medical management to MCOs. In our research, we found no states with a comparable system.

Currently, MCOs receive reimbursement proportional to their activities in three functional areas: process accuracy and efficiency, return to work and cost containment outcomes, and their performance on key substantive metrics called exceptional performance indicators.

While the relationship between the BWC and MCOs has many unique elements, it faces many of the same challenges and opportunities as other public-private partnerships.<sup>1</sup> One of the most salient negotiated factors in a public-private partnership is the appropriate allocation of risk.<sup>2</sup> Private organizations must have adequate reason to believe the financial risk of partnering with a public organization will foster financial sustainability and growth. Likewise, the public entity requires assurance that the public good will be met through contracting delivery of services to a private entity.

The future of public-private partnerships—including the Ohio BWC and MCOs—is dependent on appropriately allocating the amount of risk to both parties. It is through the use of evidence-based decision

***Public-Private Partnership:***

“A long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance.”

*The World Bank, Public-Private Partnerships Reference Guide V2.0*

<sup>1</sup> Public-Private Partnership Legal Resource Center. World Bank Group.

<sup>2</sup> Marques de Sa, I. (2017). “How Do You Build Effective Public-Private Partners?” Yale Insights, Yale School of Management.

making and contract agreements using careful analysis of data that this risk can be appropriately allocated.

Determining a total amount of money to be allocated to MCOs directly affects employers through the amount of premium they pay for their workers' compensation coverage. Determining how MCO performance should be incentivized and paid for is based on an understanding of what it is in the best interest of injured workers and employers. The medical management services for which MCOs are paid must align with the needs of injured workers and their employers as designated by HPP expectations.

This deliverable will provide the analytic structure and content necessary for these decisions. Combining data analysis with a contextual understanding of industry practices will position the BWC as a future-oriented public agency in their methods of maximizing injured worker and employer benefit through assessing and reimbursing MCO activity and performance.

It is important to note that throughout this document, it should be understood that any reference to MCO case or claim management is referring specifically to medical case management. The BWC handles all non-medical case management services.

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## 3 DELIVERABLE 4 OVERVIEW

### 3.1 Report Aims and Organization

In response to the needs outlined in the RFP, DXC has performed an analysis of current and potential future methodologies for reimbursing MCOs for services, including administrative pay, outcome-based pay, and exceptional performance incentive pay. This analysis will include the following elements:

1. Comparing Ohio's approach to industry standards through literature evaluation.
2. Examining the relative financial impact of incentives on MCO finances and associating incentive payments with intended vs. observed effects on measurable outcomes.
3. Identifying areas of opportunities for improvement of payment methodologies and recommendations to achieve successful implementation.

This deliverable includes a qualitative analysis of interviews with stakeholders from the BWC and contracted MCOs alongside a quantitative analysis of BWC provided data on payment and incentives.

### 3.2 Abbreviations and Acronyms

Abbreviation	Definition
BWC	Bureau of Workers' Compensation
EPI	Exceptional Performance Indicator
FROI	First Report of Injury
HPP	Health Partnership Program
MCO	Managed Care Organization
MCR	Medical Care Ratio
MoD	Measurement of Disability
P3	Public-Private Partnership
PHI	Private Health Industry
RTW	Return to Work
SSAE	Statement on Standards for Attestation Engagements



## **4 COMPARING OHIO'S APPROACH TO INDUSTRY STANDARDS THROUGH LITERATURE EVALUATION**

Ohio BWC has maintained a system in which contracted MCOs are compensated according to their performance, as measured both by process and outcome indicators. Ohio's workers' compensation system is unlike that of other states in a number of key aspects, including the combination of a monopolistic state fund and the contracting of medical management to MCOs. However, a thorough comparison of Ohio's system to public-private partnership industry standards can reveal where the current payment methodology is strong and where it can be improved.

### **4.1 Overview of Ohio's Current MCO Payment Methodology**

The BWC's methods for reimbursing MCOs for medical management services have remained consistent since 2016 while the details and amounts of reimbursement have changed over time. The goals and objectives of the HPP are dependent on MCOs being able to utilize payments from the BWC to provide effective medical management. Key aspects of current MCO payment methodology include the following:

- A single pot of money is available for distribution among all MCOs. In 2018, this amount is \$168,329,368.35.
- A certain amount of the pot of money is guaranteed to MCOs as the cost of doing business. The rest of the money is put at risk through performance metrics.
- Half of the money, considered administrative pay, is allocated based on a given MCO's market activity. The other half is distributed based on the MCO's percent of billed premium.
- Additional money is available according to the MCOs' abilities to meet metrics set by exceptional performance indicators as well as payments for on-site case management visits and innovative ideas.

#### **Administrative Pay (Base Rate or Base Payment)**

The administrative payment available to MCOs is based on a calculation of percent of activity, with activity measured by an MCO's market share of active employers, bill volume, FROI volume, and active claims. This administrative funding is subject to specific set-offs measured monthly, quarterly, or on occurrence. Monthly set-off metrics include FROI timing, 148/FROI data accuracy, bill timing, and 837/bill data accuracy. Quarterly set-off metrics include in-patient hospital bill data accuracy. Finally, occurrence set-off metrics include: failure to implement system changes timely, receipt of a qualified opinion on SSAE 18, inappropriate MoD appeals, and material failure to submit requested audit or compliance materials by a set deadline.

## **Outcome Payments**

Outcome pay is based on an MCO's percent of billed premiums and calculated based on the MCO's ability to meet their target MoD score in any given quarter. 90% of outcome pay is tied to an MCO's days absent portion of their MoD score, while 10% is tied to their recent medical costs portion. Outcome pay is determined based upon an MCO's performance in terms of achieving their target scores relative to their peers. Since the third quarter of 2014, MCOs compete with each other for all available outcome pay. Each MCO's target score is calculated based on the performance of the other MCOs and an MCO's percentage of outcome pay earned is based on a proration along a target line. This method allows high-performing MCOs to earn more than 100% of their share while low-performing MCOs earn less.

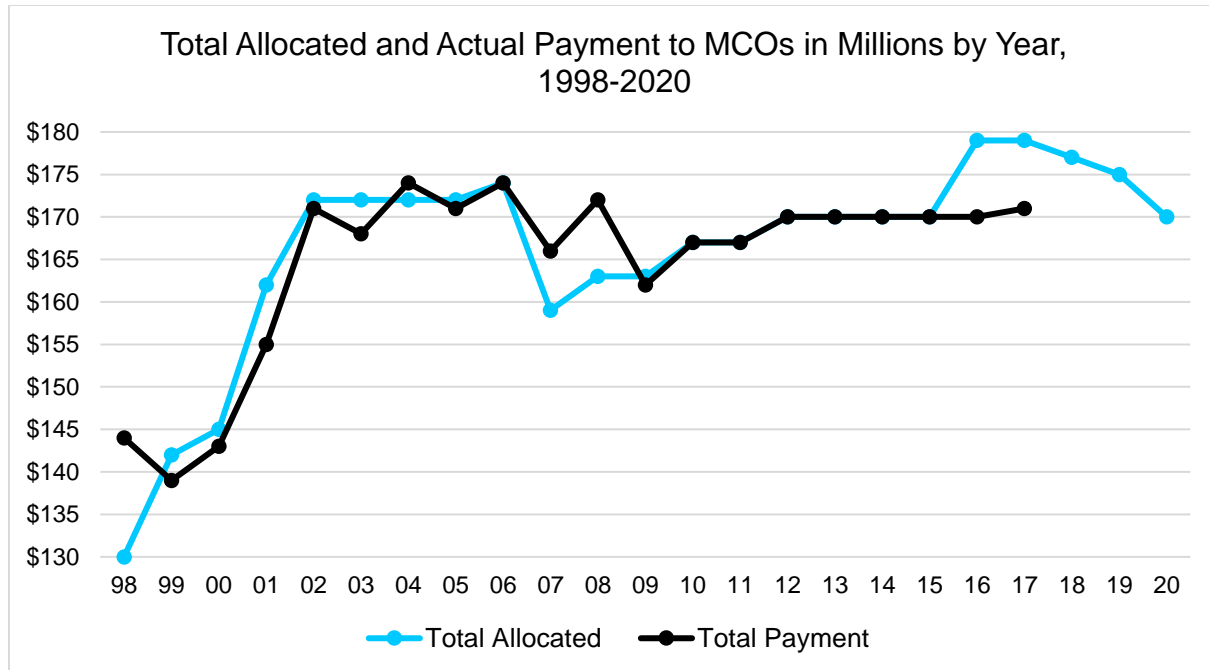
## **Additional Monies**

As of 2016, there are three ways an MCO can earn additional money on top of administrative and outcome pay. They are as follows:

1. Exceptional performance indicators (medication management, transitional work, vocational rehabilitation, legacy claims; an additional wellness program indicator was added in 2018)
2. On-site case management
3. Innovation ideas (meaning an idea for some method for system-wide improvement)

Exceptional performance indicator payments (other than payments for the wellness programs indicator) are made according to a calculation of an MCO's percent of billed premium. Successful performance in the wellness program indicator, which was introduced in 2018, is paid on a flat fee per successful referral. On-site case management is billed as a flat fee per visit. Finally, a maximum grant amount is available for the approval of an innovative idea.

The total amount of money available and paid to all MCOs each calendar year is dependent on contract terms for that year and MCO performance against defined expectations. The following figure shows total allocated payment per contract and total actual payment by year to MCOs:



There have been a number of key changes in payment methodology over time that have contributed to the trends observed in this chart.

**Change from percent of billed premium only to dual-method allocation of base payments:**

Prior to 2004, MCOs were reimbursed a percent of employer premium for those employers who selected that MCO. Premium amount is generally viewed in the managed care industry as a good indicator of the amount of activity involved. As of 2004, MCOs are paid based both on a total available amount calculated according to the MCO's activity and a percent of their billed premium. Established performance benchmarks and corresponding payment set-offs for failing to meet the performance expectations were, and continue to be, part of the contract. Having this dual-method of allocation allows the administrative portion of available money (which is calculated according to percent of activity) to place weighted focus on key MCO activity areas. This is a strength of the current payment methodology as it weights medical management of claims (65% of the administrative pay) as the most important MCO activity. Combining the two allocation methods takes into account both activity and volume, and we recommend continuing to use this dual-method payment allocation.

**Introduction of DoDM pre-payments:** Beginning in 2007, the BWC introduced outcome-based pre-payments through Degree of Disability Management (DoDM) measures. MCO payment was divided between process-based and outcome-based. Payment set-offs continued for process-based performance. These pre-payments explain why the total paid out is higher than the total allocated through 2007 and 2008.

**Change from DoDM to MoD:** Further refinement of outcome-based measures began with the introduction of Measurement of Disability (MoD) in 2012. MoD introduced the inclusion of recent

medical costs into an MCO's outcome payment and also changed the days absent measure from the date an employee is released to return to work to the date they actually return to work. The more comprehensive MoD replaced DoDM for outcome measurement. While this was a change in the payment methodology, it did not have a major impact on the amount of money paid out to MCOs.

**Change from non-competitive to competitive outcome payment:** Between 2012 and the second quarter of 2014, MCOs were able to receive up to 100% of their available outcome payment based on their MoD score. Any part of their available amount that they didn't earn went back to the BWC. Starting in the third quarter of 2014, MCOs are able to compete with each other and earn more than 100% of their available outcome payment. This model means that the sum total available outcome payment allotted by the BWC is paid out completely. While this had an impact on individual MCOs, particularly those who performed poorly, this did not have a major impact on the total MCO payment amount.

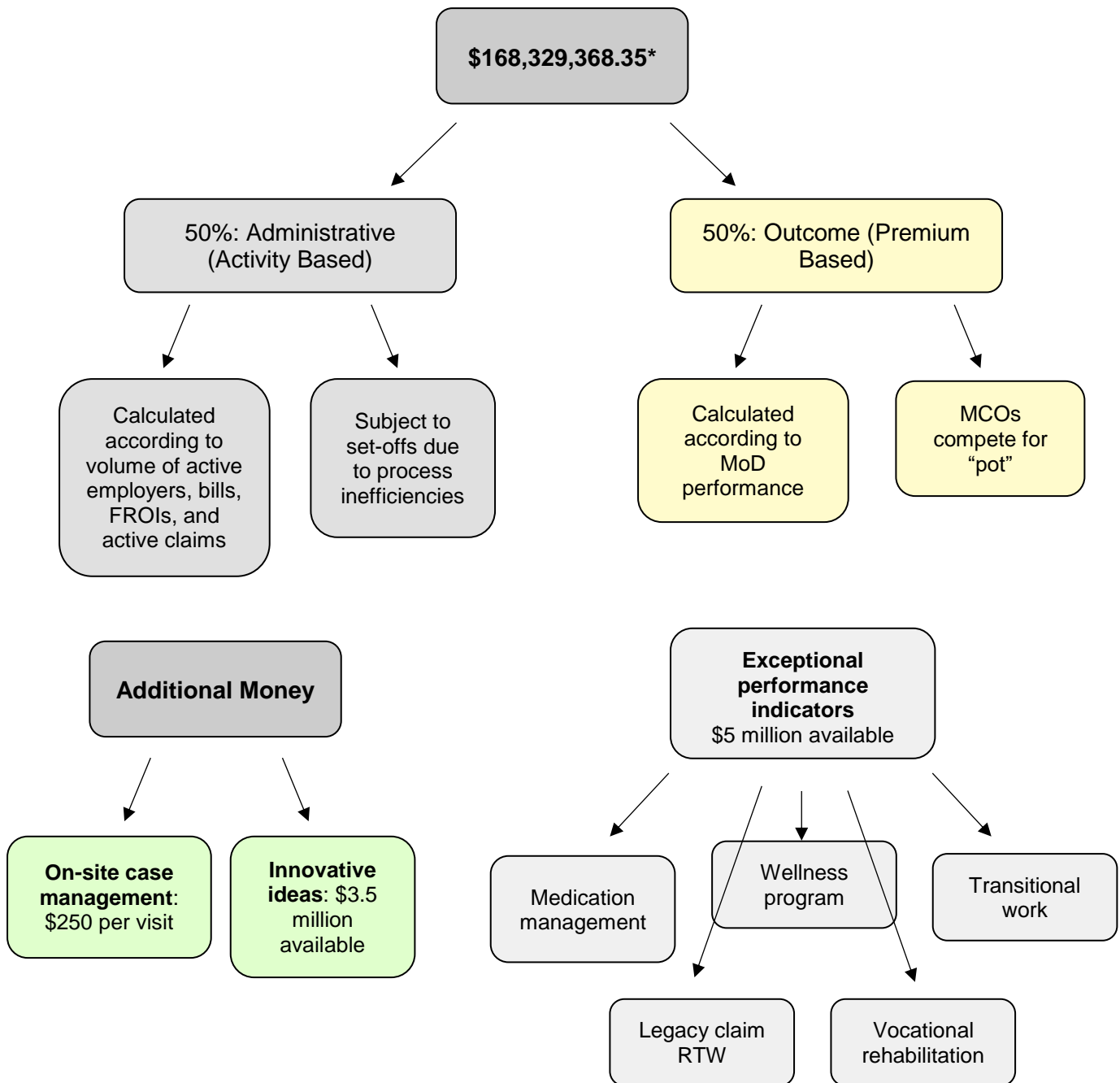
**Introduction of current additional monies:** Currently MCOs are delivering medical management for Ohio's injured workers as demonstrated in the metrics outlined in Deliverable 1. In addition to medical case management, BWC continues to take a proactive approach in workplace safety and injury prevention. These two components have placed Ohio as a leader in managing work-related injuries. However, for continuous quality improvement, BWC wanted to focus on factors that continue to hinder successful return to work for Ohio's workers.

In 2016, the BWC introduced an additional \$8.5 million annually for exceptional performance indicators and innovation ideas. Four of the exceptional performances were: Medication Management, Vocational Rehabilitation, Transitional Work, and Legacy Return to Work. These four incentives put a focus on cases of particular interest where MCO medical management strategies could assist in a resolution for the injured worker. The results could be hugely beneficial in helping injured workers return to work. Medication Management emphasizes the importance of appropriate prescribing practices. Vocational Rehabilitation focused on utilizing vocational rehabilitation services for injured workers who may not be able to return to their original job. Transitional Work continued the focus of BWC in working directly with employers to develop light duty positions, alternative employment, and other strategies to offer a way of injured workers returning to the work force while continuing to recover from their injuries. Legacy Return to Work put an emphasis on injured workers who have been off work continuously for three or more years in hopes of developing a path forward in returning the injured worker to employment.

Additionally, the 2016 contract introduced an on-site case management fee-for-service payment for which MCOs can earn \$250 per personal visit with the injured worker and/or their family. This hands-on approach is especially important when assessing a catastrophic (CAT) claim (for which on-site case management is required) or other serious claim.

## Payment Summary Methodology Diagram: Calendar Year 2018

*Note: While total available monies change by year, this methodology has been in place since 2016.*



\* The 2018-2020 contract contains a 5% decrease in the total amount of money available in 2017 spread out over the three years.

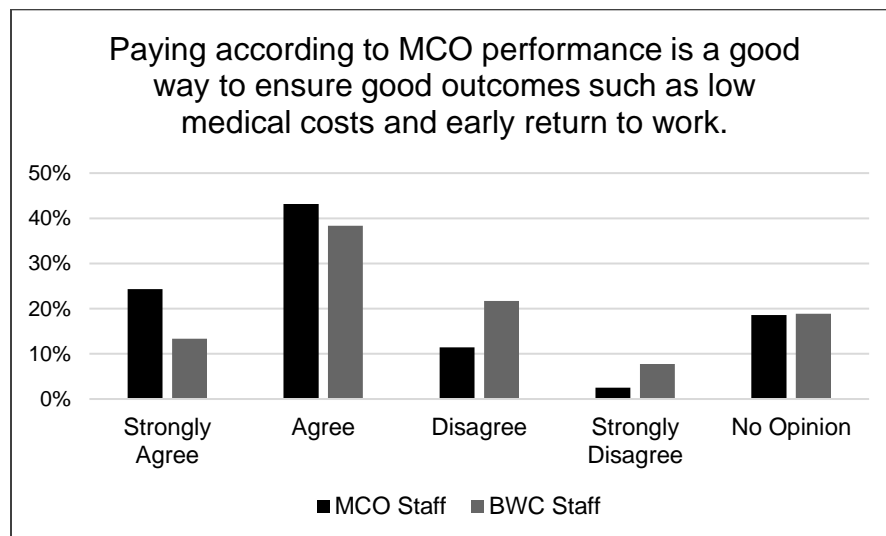
## Qualitative Response Data: Interviews and Surveys

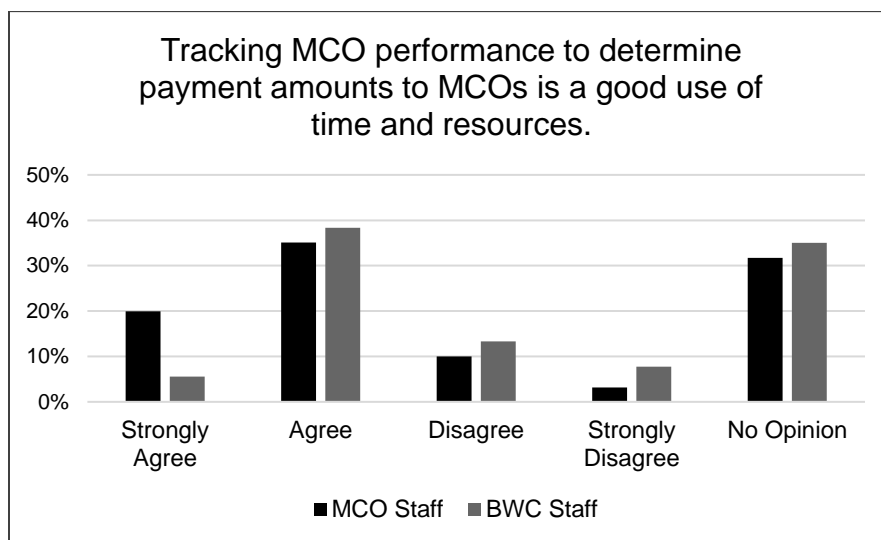
In interviewing and surveying relevant interested parties, we uncovered perspectives on MCO payment methodology. The groups included in studying perspectives on payment methodology include the following:

- BWC administrative staff
- BWC Board of Directors
- MCO executive-level staff
- BWC operations staff
- MCO operations staff

In general, results indicated that interested parties within both the BWC and MCOs agree that paying for performance is a useful way to incentivize MCOs to meet certain goals. There was, however, a significant divergence in perspectives around the specifics of how performance should be measured. Many BWC senior-level staff and the members of the Board of Directors offered that medical management is more than simply providing a process-based service; rather, an emphasis on outcomes and individual care makes paying for performance an appropriate incentive method. MCO executive-level staff generally agreed. Some expressed concern, however, about the adequacy of MoD as an accurate reflection of MCO performance, the benchmarks and reimbursement methods for exceptional performance indicators, and a perceived lack of transparency and feedback.

In a survey of MCO and BWC operational staff, 67% of MCO staff and 52% of BWC staff agreed or strongly agreed that paying according to MCO performance is a good way to ensure good outcomes such as low medical costs and early return to work. 55% of MCO staff and 44% of BWC staff agreed or strongly agreed that tracking MCO performance to determine payment amounts to MCOs is a good use of time and resources.





We were able to capture a robust dataset of open-ended survey responses from MCO and BWC operational staff on the topic of the appropriateness of payment methodology. As seen in the graphs above, respondents who answered that they disagreed or strongly disagreed with the proposition that the current method of paying MCOs for performance is appropriate (19.69% of MCO operational staff and 24.72% of BWC operational staff) were then asked an open-ended follow up question: “What are some of your concerns with paying MCOs according to their performance?”

In addition to claims level staff, we also uncovered insight on the current payment methodology from BWC administrative staff and MCO executive staff. Overwhelmingly, these staff members agree that the principle of paying for performance is appropriate. There was disagreement, however, as to how much of an MCO’s payment should be tied to performance versus how much should be tied to activity. MCO executives were more likely to say that they prefer the current model in which 50% of the money is guaranteed based on their activity. BWC administrative staff were more likely to say that more money should be placed at risk by tying it to performance while keeping some amount guaranteed as tied to MCO activity. We can see that there is generally a shared agreement among both BWC and MCO employees at all levels that paying for performance is appropriate while maintaining some percentage of steady guaranteed funding.

## 4.2 MCO Payment

Payment to MCOs are intended to provide compensation for day-to-day services that include, but are not limited to, FROIs, Medical Management Services, Provider Relations, Return to Work Services, Quality Assurance, Employer Services, and Provider Bill Processing in a timely, accurate manner. The payment amount is calculated according to a percent of activity and percent of billed premium.

In the healthcare and/or managed care arenas, administrative payments are included as part of the contract and cover basic administrative activities. For example, an employer self-insuring their healthcare will pay their Third-Party Administrator (TPA) a set fee every month for claims processing, usually based on the number of transactions or the number of employees covered by the employer. Fully insured plans, such as Blue Cross or Blue Shield will include an administrative fee based on a percent of premium which is a good indicator of activity. Other arrangements will simply add the administrative cost into the premium or enter into a cost-plus contract.

We are able to compare Ohio's MCO base rate to other environments. When we compare Medicare (with higher average claims per person and thus lower administrative costs) to the private health industry (PHI), public payment schemes found costs averaged 3.6% of total expenditures because public schemes included all health-related activities, thus having a larger total expenditure. In the private market, the average costs were around 14.1%, because the total expenditure is based on paid claims only.

When these costs are broken down, costs in the non-group market are at 20%, small-group market at 16%, and the large-group market at 11%.<sup>3</sup> Under the Affordable Care Act, costs reflect this range and are capped. Group market insurers had a 15% cap and individual market insurers had a 20% cap. If exceeded, insurers pay a rebate to policyholders.

In considering the costs for Ohio MCOs, we need to take into account the functions required as part of that operational costs which includes the FROI process, medical case management, ADR, provider bill processing, employer and provider education, and additional services. The total potential amount paid to MCOs, including base payment and incentives, is as follows:

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<sup>3</sup> Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. (2017). "2016 Annual Report of the Boards of Trustees if the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds."



	2017	2016	2015
<b>Medical Benefits Paid<sup>4</sup></b>	\$461,780,100	\$492,913,038	\$510,064,188
<b>Total MCO Fees Paid (Includes Base Rate Plus MoD Potential)</b>	\$170,797,091	\$169,229,310	\$170,688,324
<b>Total Paid</b>	\$632,577,191	\$662,142,348	\$680,752,512
<b>Total MCO Fees Paid as a % (Line 3 divided by Line 4)</b>	27%	26%	25%
<b>Base Rate % of Total MCO Fees Paid</b>	50%	50%	50%

In 2006, the Blue Cross and Blue Shield Association performed an industry-wide study that found the following to be the average costs, as a percentage of total dollars spent, or premiums, by Insurance Plan/Coverage type:

**Median Administrative Costs as Percent of Premium Equivalents,  
Blue Cross Blue Shield Plans, by Line of Business, 2006**

<b>Plan Type</b>	<b>Median % of Premium for Admin. Costs</b>
Managed Care Plan, insured	14%
Managed Care Plan, ASO*	8.5%
Indemnity and PPO**	15%
Indemnity and PPO**, ASO*	8.6%
Medicaid	13.8%

*\*Administrative Services Only (ASO) is a basic claims processing service without medical management services.*

*\*\*Preferred Provider Network (PPO) is a managed care that exercises strict utilization/access controls, as opposed to medical management services.*

Ohio BWC MCOs are most similar to insured Managed Care Plans and Medicaid because of the similarity in services offered, particularly Managed Care services.

American Health Insurance Plans performed a similar study in 2009 and found the average dollars allocated to cover costs for all Plan types combined were 12.4%.<sup>5</sup> In summary,

<sup>4</sup> These numbers are less the payments to the BWC's contracted PBM.

<sup>5</sup> Merlis, M. (2009). "Simplifying Administration of Health Insurance." National Academy of Social Insurance/National Academy of Public Administration.

the payment (Base Rate) in which the MCOs are compensated is within industry standards and is adequate to cover costs. However, the Base Rate plus the incentive payments combined (total MCO reimbursement) are well over industry standards.

To equalize the comparison of BWC MCOs to full-risk MCOs in other industries, it is critical to note the following: full-risk MCOs reduce total benefits paid (MCR or Medical Care Ratio), either through the reduction of provider payment amounts or through a reduction of utilization, full-risk MCOs maintain those savings, as profit and/or investment dollars.<sup>6,7</sup> With the BWC MCOs, when their performance generates savings, those dollars are realized to the benefit of the State Fund. Industry norms reflect that, on average, healthcare insurers target a MCR of 80% and a profit margin in the single digits.<sup>8</sup> For example with a 15% administrative allotment, and an 80% MCR, the result would be a 5% profit. The more they save in MCR, or in administrative costs, the better their profits. However, based on the population served and the geographical location (State) of coverage, regulations often dictate minimum amounts for MCR to discourage inappropriate medical management services that result in denial of access to needed care.

For example, under the Affordable Care Act rules, insurers that sell individual and small group health insurance coverage must spend at least 80 percent of premiums on medical claims (MCR) for members. No more than 20 percent of premium revenue can be spent on total administrative costs, including profits and salaries. And for insurers that sell large group coverage, the minimum MCR is 85 percent. Insurers that fail to meet these guidelines (i.e., they spend more than the allowed percentage on administrative costs) are required to send rebates to their members. Again, throughout the healthcare industry, these types of regulations are prevalent.

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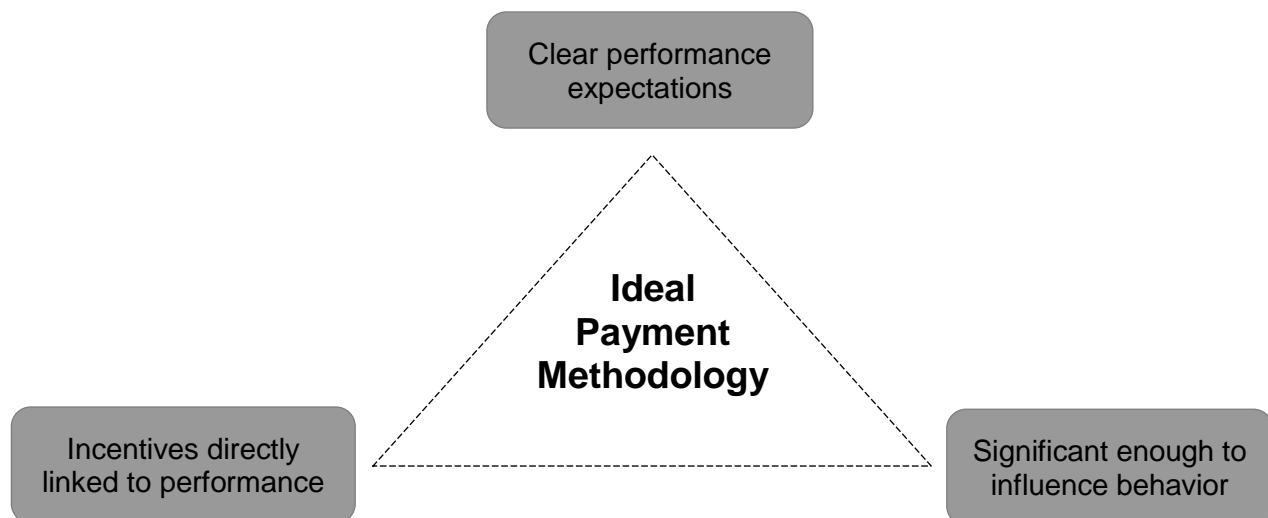
<sup>6</sup> National Association of Insurance Commissioners. Medical Loss Ratio.  
<[https://www.naic.org/cipr\\_topics/topic\\_med\\_loss\\_ratio.htm](https://www.naic.org/cipr_topics/topic_med_loss_ratio.htm)>.

<sup>7</sup> Centers for Medicare and Medicaid Services. Medical Loss Ratios.  
<<https://www.cms.gov/CCIIO/Programs-and-Initiatives/Health-Insurance-Market-Reforms/Medical-Loss-Ratio.html>>.

<sup>8</sup> Norris, L. (2018). "Are Health Insurance Companies Making Unreasonable Profits? Very Well Health. <<https://www.verywellhealth.com/health-insurance-companies-unreasonable-profits-1738941>>.

## 5 EXAMINING THE RELATIVE FINANCIAL IMPACT OF INCENTIVES ON MCO FINANCES AND ASSOCIATING INCENTIVE PAYMENTS WITH INTENDED VERSUS OBSERVED EFFECTS ON MEASURABLE OUTCOMES

The fundamental assumption present in a discussion about payment methodology is that MCOs will align their focuses, resources, and activities with a carefully-calculated return on investment based on financial penalties and incentives levied by the BWC. As such, it is paramount that MCOs are able to see an attractive ROI from activities that achieve BWC goals. The BWC is in a position to leverage MCOs' financial interests in developing a payment methodology that can align MCOs' focuses with BWC's. An ideal payment methodology will have three key elements. First, it must have fair and transparent expectations of performance. Second, incentives and penalties must be directly linked to performance. Third, the penalties and incentives must be substantial enough to adequately influence MCO behavior. This section will examine if the incentives are linked to improved performance and if they are significant enough to influence behavior.



In this section, we will examine the impact of the current payment methodology on MCO activity. We will look at the impact that various elements of the payment methodology have on MCO finances and activities. We are particularly interested in finding statistically significant evidence to show that elements of the payment methodology either do or do not influence MCO behavior the way they are intended. Based on these analyses, we will provide

recommendations and strategies for implementation to strengthen BWC's method for paying MCOs.

## 5.1 Administrative Payment Set-offs

### Monthly Set-off Measures

Monthly set-offs include FROI timing, FROI data accuracy, bill timing, and bill data accuracy. MCOs are expected to execute these administrative responsibilities within a specific timeframe (FROI timing less than 12 days and bill timing less than 8 days) and above a specific measure of accuracy (FROI system data accuracy greater than 94% and bill data accuracy greater than 98%). The following table shows the counts for instances of monthly set-offs for each MCO over a five year period (2013-2017), which did not result in a successful appeal.

MCO ID	FROI Timing	Bill Timing	FROI Data Accuracy	Bill Data Accuracy	
10002	0	0	0	2	
10005	0	0	0	0	
10006	0	0	0	2	
10008	0	0	0	0	
10010	0	0	0	0	
10011	0	0	0	0	
10013	0	0	1	0	
10016	0	0	1	0	
10017	2	0	4	1	
10026	0	0	0	0	
10041	0	0	0	0	
10042	3	0	7	1	
10052	2	0	1	0	
10060	1	2	1	2	
10061	0	0	0	0	
10073	1	2	1	0	
10074	3	2	1	2	
<b>TOTAL</b>	<b>12</b>	<b>6</b>	<b>17</b>	<b>10</b>	<b>45</b>

Based on this data, we can predict that an administrative monthly set-off for any MCO occurs, on average, about once every six weeks, or about one per 21,834 claims. This does not

amount to any significant portion of claims processed by MCOs. We further analyzed the risk of monthly set-offs to MCOs by calculating the percentage of available administrative money lost to MCOs for monthly set-offs between 2013 and 2017. The following table shows these calculations.

MCO ID	Total Available Administrative Pay (2013 – 2017)	Total Set-off Penalties	Percent
10002	\$60,950,768.15	\$26,576.02	0.0436%
10005	\$87,754,668.52	\$0.00	0.0000%
10006	\$26,266,431.77	\$8,143.26	0.0310%
10008	\$9,387,125.43	\$0.00	0.0000%
10010	\$149,992,844.31	\$0.00	0.0000%
10011	\$16,656,168.82	\$0.00	0.0000%
10013	\$20,103,591.85	\$4,154.97	0.0207%
10016	\$7,674,844.54	\$1,505.29	0.0196%
10017	\$6,951,791.36	\$9,700.50	0.1395%
10026	\$7,193,837.94	\$0.00	0.0000%
10041	\$38,819,344.00	\$0.00	0.0000%
10042	\$3,055,132.53	\$6,591.38	0.2157%
10052	\$6,714,798.44	\$4,174.16	0.0622%
10060	\$5,055,523.63	\$6,275.96	0.1241%
10061	\$2,662,427.29	\$0.00	0.0000%
10073	\$3,512,676.53	\$2,996.43	0.0853%
10074	\$4,912,219.42	\$7,682.55	0.1564%

We can see from this data that MCOs lose a relatively small amount of money from their total available administrative payment due to set-offs. The average money lost for an MCO is 0.053% of their monthly administrative pay. For MCOs who are penalized greater than \$0.00 for monthly administrative set-offs, the average amount lost is 0.09%. For MCOs which are subject to administrative set-offs based on their failure to meet administrative set-off benchmarks on one or more measures, less than an average of 1% of their total administrative pay is lost to monthly set-off penalties. This could be due to two reasons: either MCOs are performing at an appropriate degree of process efficiency, or the current expectations are too low. Given that the overall number of set-offs relative to claim volume is very low, we can infer that MCOs are currently operating at appropriate efficiency given the current benchmarks and we do not recommend altering the payment structure for administrative set-offs.

## **Inappropriate MoD Appeals**

MCOs can receive an administrative set-off for submitting an appeal to their MoD score if the appeal is defined in the contract terms as inappropriate. MCOs have the opportunity to appeal the MoD score for any given claim if they believe the score was calculated using incorrect information and if their overall score for the quarter corresponds to a peer comparison calculation less than 1.05 or if their score is going to be published in a report card. It is necessary for MCOs to continue to have the option to appeal. In 2016 and 2017, the BWC granted 5,913 appeals (84% of total appealed claims and 3.4% of net allowed injuries). The option to appeal allows MCOs and the BWC to ensure that RTW data is accurately kept and checked. We do not recommend removing MCOs' right to appeal MoD scores.

Currently, MCOs are penalized for inappropriate MoD appeals based on their overall appeal success rate for a quarter.

- If their success rate (calculated by dividing number of granted appeals by the total number of appeals) is greater than 76%, they are penalized \$0 per inappropriate appeal.
- If their success rate is between 66% and 75%, they are penalized \$5 per inappropriate appeal.
- If their success rate is between 51% and 65%, they are penalized \$25 per inappropriate appeal.
- If their success rate is between 0% and 50%, they are penalized \$50 per appeal.

In order to determine if these are the appropriate benchmarks, we can look at past appeals data to see what penalties were assessed on the MCOs. The following table shows the average success rate, total money lost to inappropriate appeal penalties, and percentage of appeal penalties compared to total administrative payment available in 2016 and 2017.

MCO ID	Total Administrative Pay (2016-2017)	Average Appeal Success	Total Appeal Penalty	Penalty Percent of Total Admin Pay
10002	\$21,863,171.61	78.85%	\$4,700	0.02152%
10005	\$33,820,332.74	92.63%	\$0	0.00000%
10006	\$12,058,643.91	64.29%	\$215	0.00469%
10008	\$3,189,759.76	15.00%	\$200	0.00784%
10010	\$56,230,170.90	83.94%	\$45	0.00008%
10011	\$6,681,146.87	64.07%	\$630	0.01751%
10013	\$7,558,235.20	35.60%	\$650	0.00860%
10016	\$2,756,296.60	N/A	N/A	N/A
10017	\$2,450,285.15	N/A	N/A	N/A
10026	\$7,193,837.94	N/A	N/A	N/A
10041	\$15,472,694.35	62.85%	\$6,880	0.04705%
10042	\$1,111,327.12	0.00%	\$400	0.03599%
10052	\$6,714,798.44	N/A	N/A	N/A
10060	\$1,660,832.23	N/A	N/A	N/A
10061	\$2,662,427.29	N/A	N/A	N/A
10073	\$1,404,906.15	0.00%	\$900	0.09609%
10074	\$1,802,836.47	N/A	N/A	N/A

*N/A indicates that the MCO did not appeal any MoD scores in 2016 and 2017.*

In 2016 and 2017, the average appeal success rate was 84%. The average penalty percent of total admin pay was 0.024%. This is not a particularly high risk for MCOs given the current average success rate. Processing appeals represents a significant workload for the BWC's MCO business reporting unit, and applying financial penalties to inappropriate appeals as determined by an MCO's overall success rate is intended to deter MCOs from submitting inappropriate and non-grantable appeals. However, it doesn't seem to be having the intended effect. In 2016 and 2017, 1,125 appeals were denied and 799 were deemed inappropriate. This averages to about 99 inappropriate appeals per quarter reviewed by the BWC.

In order to protect the ability of MCOs to appeal in good faith, while also further deterring inappropriate appeals or appeals that have not been thoroughly analyzed by the appealing



MCO prior to submission, we recommend maintaining the current method of levying penalties based on the overall success rate and increasing the amount of penalties. MCOs that maintain high standards of reviewing their appeals before they are submitted, and thus maintain above a 75% success rate, will not be impacted by a higher financial penalty. MCOs that do not ensure the same standards and receive lower than a 75% success rate will be impacted. Increasing the financial penalty for inappropriate MoD appeals will act to deter the latter group from continuing to submit inappropriate appeals.

## **5.2 MoD-Based Outcome Payments**

The logic of the MoD outcome payment is that if MCOs are adequately incentivized, they will continually strive to exceed their target MoD score each quarter. Because the MoD score is composed of an evaluation of MCO performance in terms of both days absent and recent medical, MCOs can improve their MoD score by improving either metric. This is especially true given the competitive model currently used to dispense outcome payments wherein an MCO can be rewarded for performing better than expected by earning more than their calculated available outcome payment.

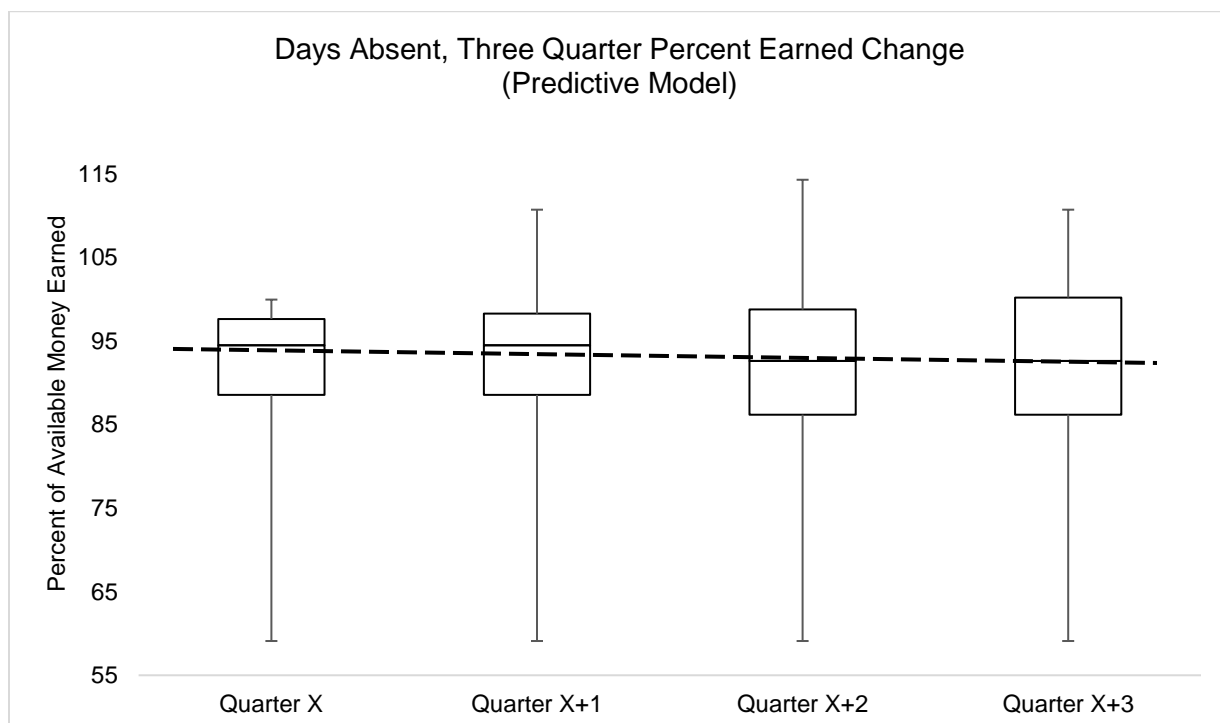
First, we identified the key strengths of the MoD scoring method and its associated payment system. Based on industry comparisons, numerous interviews with key subject matter experts, and review of contract appendices explaining MoD, we determined the following:

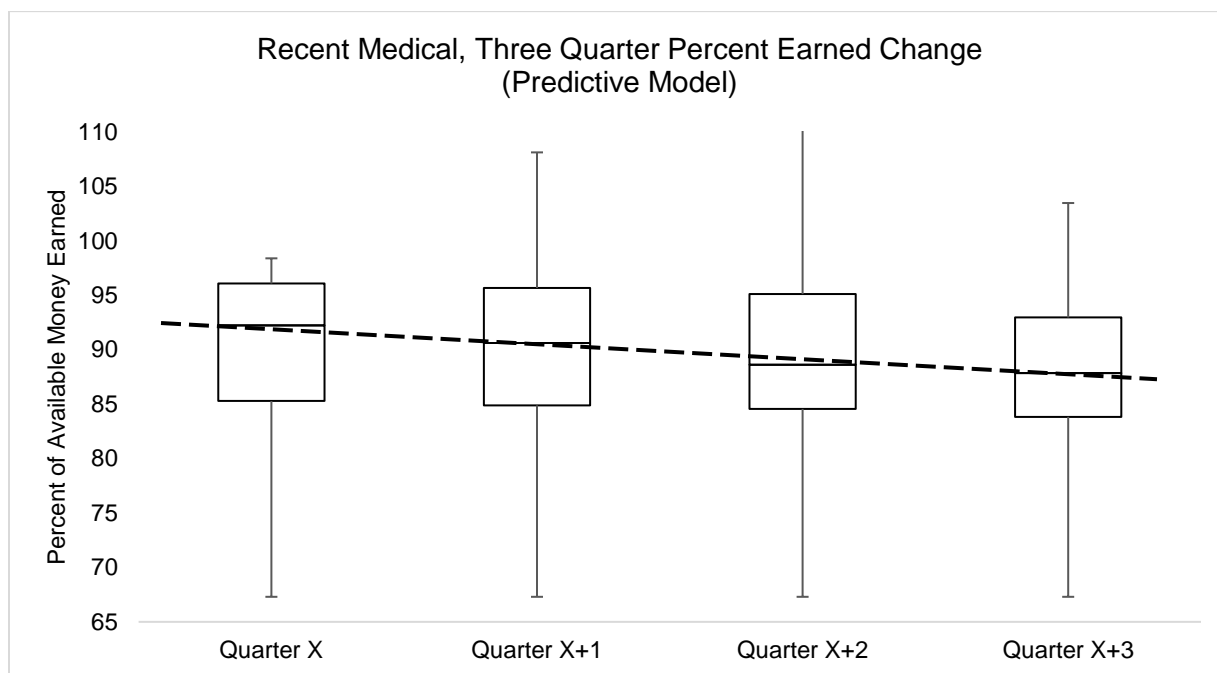
1. MoD is a sophisticated, robust proxy indicator for MCO medical management and MCOs' ability to meet the primary goal of returning injured workers back to work in an appropriate amount of time.
2. MoD is more accurate than ODG (the national guidelines for injured worker days absent) for Ohio workers. It uses a smaller population based on previously observed results in Ohio instead of calculating for every possible combination of job and injury and averaging across the entire U.S., limiting the population as much as possible while retaining the members of the relevant group to observe limits the variability in the measured data. Limiting the variability reduces the standard error, which means it also increases the likelihood that an estimate or prediction is going to be correct.
3. Workers' compensation industry literature consistently reports that measuring and incentivizing success based on outcomes (which MoD does) rather than administrative processes alone is a strong, future-oriented method for producing positive results.
4. The competitive payment model is designed to promote consistent competition among MCOs while still maintaining a level playing field by standardizing for relative size and billed premium.

## 5.2.1 Impact of Current Method

In order to determine the impact of payment methodology on an MCO's ability to reach their target MoD score, we tested the hypothesis that receiving less than 100% of their available outcome payment in a quarter would predict an MCO meeting their target MoD within three quarters. This is consistent with the logic that if an MCO has the opportunity to earn more money in future quarters, they will alter their operational activities in order to earn that money. The time period to check within three quarters was chosen to remain consistent with the MoD score measuring claims eligible for inclusion in the 12 month measurement period. If there is evidence that a score, on average, increases to the target within three quarters, it would show that the penalty of receiving an amount lesser than anticipated and/or the possibility of earning 100% or more of their available outcome payment is an adequate way to incentivize an MCO to meet their target MoD. If this incentive is not adequate, it will provide evidence for the need to assess possible reasons for observed results.

A correlation matrix was constructed to examine the relationship of MoD score performance in one quarter to performance in subsequent quarters. We included in this analysis any MCO that earned less than 100% of their available outcome payment in any given quarter. We then compared their performance in that quarter to three subsequent quarters. Our analyses indicate that MCO performance does not improve in response to the receipt of financial penalties. In fact, there is a linear relationship between MCO MoD performance over time with high-performing MCOs continuing to do well and low-performing MCOs continuing to perform sub-optimally, even when performance is linked to payment. These results appear to indicate a failure of the existing MoD incentive payment to result in performance improvements among MCOs.





The above shows the result of our analysis of change in days absent and recent medical MoD scores over three subsequent quarters for MCOs that earn less than 100% of their available outcome payment in any given quarter. The dashed line indicates the median trend. We found no evidence to show that MCOs improve their MoD score performance as a result of earning less than 100% of their available outcome payment. This leads us to reject our hypothesis that the current payment methodology adequately incentivizes MCOs to increase their MoD score.

Given that the overall incentive amount available to MCOs appears more than adequate to change behavior (section 4.2), we believe the distribution methodology of competitive payment in which a pool of money is shared among MCOs does not create an environment in which optimal performance is rewarded. The competitive method that is being used now is not meeting the goals of the HPP because it does not incentivize continuous improvement among MCOs as a whole, but rather relative to one another. We recommend reverting to the non-competitive method in which MCOs were paid according to an absolute threshold based on historical benchmarks.

## 5.3 Additional Monies

### 5.3.1 Exceptional Performance Indicators

MCOs have the ability to earn extra money in addition to their administrative and outcome payments. One key way to earn this additional money is through meeting the standards set forth by exceptional performance indicators.

There are currently five exceptional performance indicators for which MCOs can earn additional money based on their capacity to successfully implement programs to meet specific goals. Four of these indicators were instituted in 2016 while the fifth was added in 2018. We reviewed the four indicators implemented in 2016:

**Medication management.** This EPI has been allocated \$1,125,000 in 2018 and contains two categories: elderly injured workers and high-risk drug regimens. The first is worth 40% of the available money and requires MCO intervention on individuals over 65 years of age who are prescribed a medication on the Beers Criteria for Potentially Inappropriate Medication Use in Older Adults.<sup>9</sup> The second is worth 60% of the available money and requires MCO intervention on injured workers who take four or more of eight drug classes known to add to the risk of death when taken together.

**Vocational rehabilitation.** This EPI has \$1,125,000 available to MCOs in 2018 and is also made up of two categories: decision making (worth 70%) and outcomes (worth 30%). Decision making requires referrals for vocational rehabilitation, assignment to a rehabilitation case manager, and avoiding pre-plan closures. The outcomes category measures rehabilitation closure with return to work.

**Transitional work.** Worth up to \$900,000 in 2018, this EPI consists of increasing the award of transitional grants to employers (40% of available money) and increasing the use of transitional return to work (60% of available money).

**Legacy return to work.** According to the 2017 annual HPP report, legacy RTW claims “have the greatest impact on the workers’ compensation system and on the lives of injured workers.” \$1,350,000 is available for this EPI in 2018. In order to earn a share of this money, MCOs must assist injured workers who have been out of work continuously for three or more years with returning to work for at least 30 days.

While wellness programs have been implemented more recently as an additional metric for exceptional performance payments, there is not yet enough data to explore its effectiveness using quantitative predictive methods.

The total amount allocated to these programs was \$3.4 million in the 2016-2017 contract and \$4.5 million in the 2018-2020 contract. According to the FY2017 annual report, the payment weights for each indicator is determined based on “a consideration of the challenge, impact opportunity, and optimal end-objective.” Because the purpose of this report is to determine if the

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<sup>9</sup> American Geriatrics Society. “Beers Criteria for Potentially Inappropriate Medication Use in Older Adults.”

current payment methodology is adequate for motivating desired behavior, we will specifically analyze the effect of EPI payment methods on MCO performance.

The following two tables show the percent of money earned for each MCO's EPI participation for 2016 and 2017, respectively.

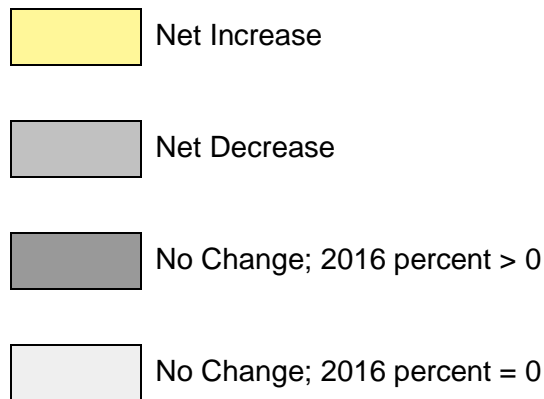
<b>2016 EPI Percent Earned</b>				
<b>MCO ID</b>	<b>Rx Mgmt.</b>	<b>Trans Work</b>	<b>Voc Rehab</b>	<b>Legacy RTW</b>
10002	0.00%	2.09%	8.40%	0.00%
10005	37.77%	67.87%	4.87%	0.00%
10006	0.00%	11.63%	70.00%	0.00%
10008	0.00%	4.87%	70.00%	0.00%
10010	17.51%	66.88%	49.70%	0.00%
10011	0.00%	65.00%	54.26%	0.00%
10013	0.00%	10.48%	70.00%	0.00%
10016	0.00%	6.31%	40.49%	0.00%
10017	52.33%	0.00%	70.00%	0.00%
10041	84.59%	67.59%	70.00%	0.00%
10042	0.00%	100.00%	100.00%	0.00%
10073	0.00%	0.00%	0.00%	0.00%
10074	0.00%	6.17%	90.79%	0.00%

<b>2017 EPI Percent Earned</b>				
<b>MCO ID</b>	<b>Rx Mgmt.</b>	<b>Trans Work</b>	<b>Voc Rehab</b>	<b>Legacy RTW</b>
10002	60.00%	65.39%	100.00%	0.00%
10005	38.08%	68.22%	74.55%	0.00%
10006	0.00%	18.10%	70.00%	0.00%
10008	0.00%	3.38%	70.00%	0.00%
10010	3.50%	67.67%	65.80%	0.00%
10011	0.00%	81.53%	91.86%	0.00%
10013	0.00%	72.61%	70.00%	0.00%
10016	0.00%	3.87%	100.00%	0.00%
10017	12.45%	0.00%	70.00%	0.00%
10041	100.00%	67.70%	70.00%	0.00%
10042	0.00%	65.00%	100.00%	0.00%
10073	0.00%	21.85%	30.00%	0.00%
10074	0.00%	4.82%	87.25%	0.00%

From this data, we can see that five MCOs earned money for medication management, 12 MCOs earned money for transitional work grants, 13 MCOs earned money for vocational rehab, and zero MCOs earned money for legacy return to work.

In order to compare performance over time, the following table shows the change in percent of money earned by each MCO for EPI performance.

<b>2016-2017 EPI Percent Earned Change</b>				
<b>MCO ID</b>	<b>Rx Mgmt.</b>	<b>Trans Work</b>	<b>Voc Rehab</b>	<b>Legacy RTW</b>
10002	60.00%	63.31%	91.60%	0.00%
10005	0.32%	0.35%	69.68%	0.00%
10006	0.00%	6.46%	0.00%	0.00%
10008	0.00%	-1.50%	0.00%	0.00%
10010	-14.00%	0.79%	16.11%	0.00%
10011	0.00%	16.53%	37.60%	0.00%
10013	0.00%	62.13%	0.00%	0.00%
10016	0.00%	-2.44%	59.51%	0.00%
10017	-39.88%	0.00%	0.00%	0.00%
10041	15.41%	0.11%	0.00%	0.00%
10042	0.00%	-35.00%	0.00%	0.00%
10073	0.00%	21.85%	30.00%	0.00%
10074	0.00%	-1.35%	-3.54%	0.00%



Based on a review of this data, we can see the transitional work EPI has been the most successful of the four indicators based on both its participation rate (12 out of 13 MCOs) as well as the overall increase in percent earned between 2016 and 2017. While all MCOs earned money in both years for the vocational rehabilitation indicator, it did not have as much growth in participation as did transitional work. Only five MCOs earned money for medication management, and of those five, two earned less in 2017 than they did in 2016. Finally, no MCOs met the performance requirements for RTW claims in either 2016 or 2017.

In interviews with both BWC administrative and MCO executive-level staff, we learned there has been a learning curve for these performance indicators. Additionally, there is some variability in performance reporting based on the fact that two of the EPIs (Medication Management and Transitional Work) are self-reported by MCOs while the others are reported based on internal BWC reports. Further discussion on the appropriateness and implications of EPI benchmarks and reporting protocols will be found in Deliverable 3: Assessment of the Current MCO Performance Measurement Protocol.

Exceptional performance indicators represent areas of specific focus important to medical management and are also likely to also improve metrics directly linked to outcome payments. The incentive for performing at an exceptional standard must be high enough to attract MCO participation and the performance benchmarks must be set at a level that is both feasible and challenging. It is only by combining these two elements in the EPI payment methodology that MCOs can act on an attractive risk to return ratio and put efforts towards meeting EPI goals. We can see from the percent change in MCO performance between 2016 and 2017 that there is a general net increase in EPI achievement, with the exception of the Legacy RTW indicator. This indicates that the benchmarks are currently set appropriately. However, as this is a new initiative we recommend revisiting the benchmarks after five years to re-evaluate results. As we do not recommend a change in the payment structure for exceptional performance indicator payments, further discussion of and recommendations for these indicators can be found in Deliverable 3: Assessment of the Current MCO Performance Measurement Protocol.

### **5.3.2 On-Site Case Management**

On-site case management is a normal activity within medical management services. Currently among Ohio WC MCOs, on-site visits are required for catastrophic claims but not for non-catastrophic claims. We would expect on-site case management to be utilized during MCO medical management as a best practice to bring organization and quality for the injured worker. The MCO/BWC contract explains that MCOs are obligated to provide appropriate levels of medical case management. In other environments, on-site case management is recommended to be used judiciously. For example, in Georgia, the following are expectations for on-site case visits:

“Situations where on-site case management services may be needed are as follows:

1. When employee has verbal communication barrier (no telephone; limited educational levels; hearing loss; does not speak English).
2. No agreement on treatment plan, or misunderstanding of treatment plan by any or all parties hindering progression of return to work.
3. At the request of the injured employee.

4. Facilitate initial emergency treatment to expedite medical care.”<sup>10</sup>

Our research determined that on-site case management is a normal part of medical case management. An entity responsible for medical management of a claim should also be responsible for determining when on-site case management is needed. We recommend that MCOs and BWC reevaluate medical management guidelines and consider development of a payment structure that would reward high-value use of on-site case management only when intense medical management is required.

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<sup>10</sup> Georgia SBWC. “Certified WC/MCO Medical Case Management.” <  
[https://sbwc.georgia.gov/sites/sbwc.georgia.gov/files/imported/SBWC/Files/mco\\_cmg.pdf](https://sbwc.georgia.gov/sites/sbwc.georgia.gov/files/imported/SBWC/Files/mco_cmg.pdf)>.



## **6 IDENTIFYING OPPORTUNITIES FOR IMPROVEMENT OF PAYMENT METHODOLOGIES AND RECOMMENDATIONS TO ACHIEVE SUCCESSFUL IMPLEMENTATION**

Based on our analysis of the data, we can make a number of recommendations to improve the current payment methodology employed by the BWC to pay MCOs for their medical management services. They are based on our findings that the current methodology is strong and can be improved through adding new elements and changing the details of existing elements. This section will follow the organization of the previous section by first giving recommendations for administrative payment methods, outcome payment methods second, and additional monies third.

### **6.1 MCO Payment**

The total amount that BWC reimburses the MCOs (including Base Rate and Incentives) is well above industry norms. Industry standard puts expected administrative pay between 14% and 15% of total expenditures. BWC may want to consider what full-risk MCOs could potentially earn in profits with what the participating BWC MCOs could make in incentives. In doing so, this corroborates that what the BWC MCOs are currently earning is too high as a percent of total medical benefits paid. BWC spends 27% of its total medical benefits on MCO medical management. We recommend Ohio undertake a strategy which appropriately takes into account unique attributes of the Ohio environment to better align MCO medical management spending with the managed care industry.

We also recommend discontinuing a guaranteed full distribution of incentive dollars. Incentives should be considered potential earned dollars and should only be distributed if a target MoD score is met.

Additionally, given that the overall number of set-offs relative to claim volume is very low, we can infer that MCOs are operating at appropriate efficiency given the current benchmarks. Therefore, we do not recommend altering the existing model in which failure to achieve administrative process benchmarks result in an MCO being put at capacity or incurring an administrative setoff.

### **6.2 Inappropriate MoD Appeals**

Unlike monthly set-offs, inappropriate MoD appeals happen at a much higher occurrence. These appeals represent a significant opportunity cost for the BWC as they require a significant amount of time and staff effort to address. Based on interviews with relevant parties and a review of the contract and MCO policy guide, we do not recommend that the definition of

inappropriate MoD appeal be altered. Rather, we recommend increasing the financial risk of submitting an inappropriate MoD appeal.

Our recommendation recognizes the importance of allowing MCOs to appeal and the room for MCOs to make honest mistakes in submitting inappropriate appeals by not penalizing them if their appeal success rate is high enough. We recommend keeping the stratified method of levying penalties based on the overall appeal success rate, but increasing the amount per success rate category. The following table shows three options for this increase:

Percent of Successful Appeals	As Is	Option 1	Option 2	Option 3
0% - 50%	\$50	\$100	\$150	\$200
51% - 65%	\$25	\$50	\$75	\$100
66% - 75%	\$5	\$10	\$15	\$20
76% - 100%	\$0	\$0	\$0	\$0

To illustrate how these amounts would affect MCOs, the following table shows their hypothetical financial risk with these three options based on their appeal performance in the past five years:

MCO ID	Total Penalty		
	Option 1	Option 2	Option 3
10002	\$9,410.00	\$14,115.00	\$18,820.00
10005	\$0.00	\$0.00	\$0.00
10006	\$1,130.00	\$1,695.00	\$2,260.00
10008	\$500.00	\$750.00	\$1,000.00
10010	\$90.00	\$135.00	\$180.00
10011	\$2,140.00	\$3,210.00	\$4,280.00
10013	\$1,800.00	\$2,700.00	\$3,600.00
10016	\$0.00	\$0.00	\$0.00
10017	\$0.00	\$0.00	\$0.00
10026	\$0.00	\$0.00	\$0.00
10041	\$7,280	\$14,560.00	\$21,840.00
10042	\$400	\$800.00	\$1,200.00
10052	\$0.00	\$0.00	\$0.00

10060	\$0.00	\$0.00	\$0.00
10061	\$0.00	\$0.00	\$0.00
10073	\$1,350	\$2,700.00	\$4,050.00
10074	\$0.00	\$0.00	\$0.00

Increasing the amount of financial penalty in each of the successful appeal rate categories while keeping the highest success rate category at \$0 per inappropriate appeal can add significant risk to MCOs who continually submit inappropriate appeals with low appeal success rates without penalizing MCOs who use the appeal process in good faith. We recommend option three. This option will substantially increase the financial penalties for MCOs which submit multiple inappropriate appeals without overly penalizing those MCOs with otherwise high rates of appeal success.

## 6.3 On-Site Case Management

Our research determined that on-site case management is a normal part of medical case management. An entity responsible for medical management of a claim should also be responsible for determining when on-site case management is needed. We recommend that MCOs and BWC reevaluate medical management guidelines and consider development of a payment structure that would reward high-value use of on-site case management only when intense medical management is required.

## 7 EXECUTIVE SUMMARY

MCOs receive reimbursement proportional to their activities in three functional areas: process accuracy and efficiency, return to work and cost containment outcomes, and their performance on key substantive metrics called exceptional performance indicators.

While the relationship between the BWC and MCOs has many unique elements, it faces many of the same challenges and opportunities as other public-private partnerships.<sup>11</sup> One of the most salient negotiated factors in a public-private partnership is the appropriate allocation of risk.<sup>12</sup> Private organizations must have adequate reason to believe the financial risk of partnering with a public organization will foster financial sustainability and growth. Likewise, the public entity requires assurance that the public good will be met through contracting delivery of services to a private entity.

When considering payment methodology, therefore, BWC may want to consider what full-risk MCOs could potentially earn in profits with what the participating BWC MCOs could make in incentives. In doing so, this corroborates that what the BWC MCOs are currently earning is too high as a percent of total medical benefits paid. BWC spends 27% of its total medical benefits on MCO administrative payments, comprised of the administrative base rate and outcome payments. Industry standards in similar environments reflects an administrative payment of 14% to 15% of medical management spending to total expenditure. In addition, we recommend discontinuing the guaranteed full distribution of incentive dollars. Incentives should be considered potential earned dollars and should only be distributed if a target MoD score is met. We recommend Ohio undertake a strategy which appropriately takes into account the unique attributes of the Ohio environment to better align payments for MCO medical management with the managed care industry.

Another area of importance for the BWC are the exceptional performance indicators which represent areas of specific focus important to medical management. These metrics are also likely to improve measures directly linked to outcome payments. The incentive for performing at an exceptional standard must be high enough to attract MCO participation and the performance benchmarks must be set at a level that is both feasible and challenging. It is only by combining these two elements in the EPI payment methodology that MCOs can act on an attractive risk to return ratio and put efforts towards meeting EPI goals.

Finally, our research determined that on-site case management is a normal part of medical case management. An entity responsible for medical management of a claim should also be responsible for determining when on-site case management is needed. We recommend that MCOs and BWC reevaluate medical management guidelines and consider development of a payment structure that would reward high-value use of on-site case management only when intense medical management is required.

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<sup>11</sup> Public-Private Partnership Legal Resource Center. World Bank Group.

<sup>12</sup> Marques de Sa, I. (2017). "How Do You Build Effective Public-Private Partners?" Yale Insights, Yale School of Management.

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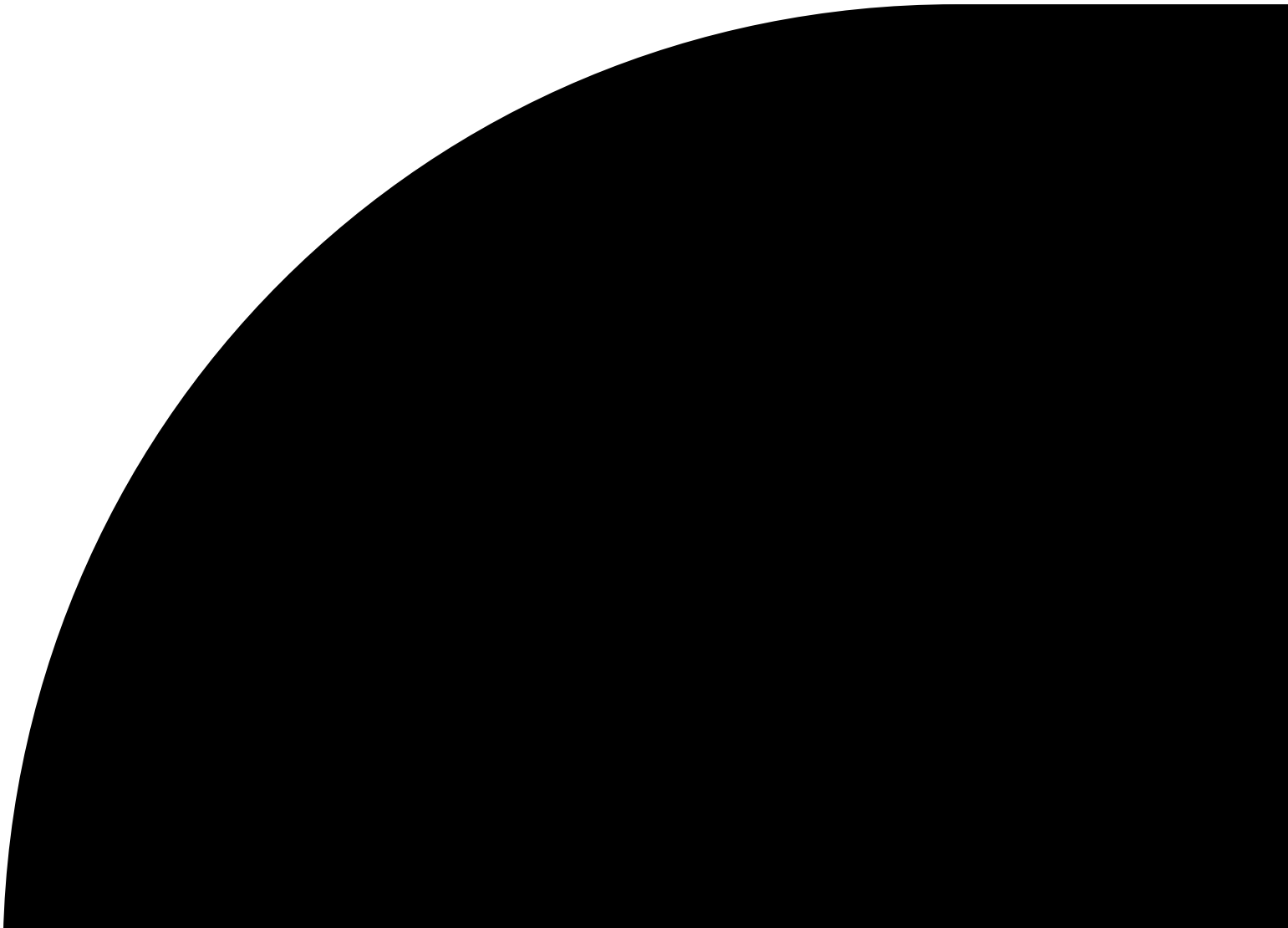
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# **Deliverable 5**

**DXC report for The Ohio Bureau of Workers' Compensation  
Managed Care Organization Impact Study**

RFP DABWC-18-EP-002

12<sup>th</sup> December, 2018

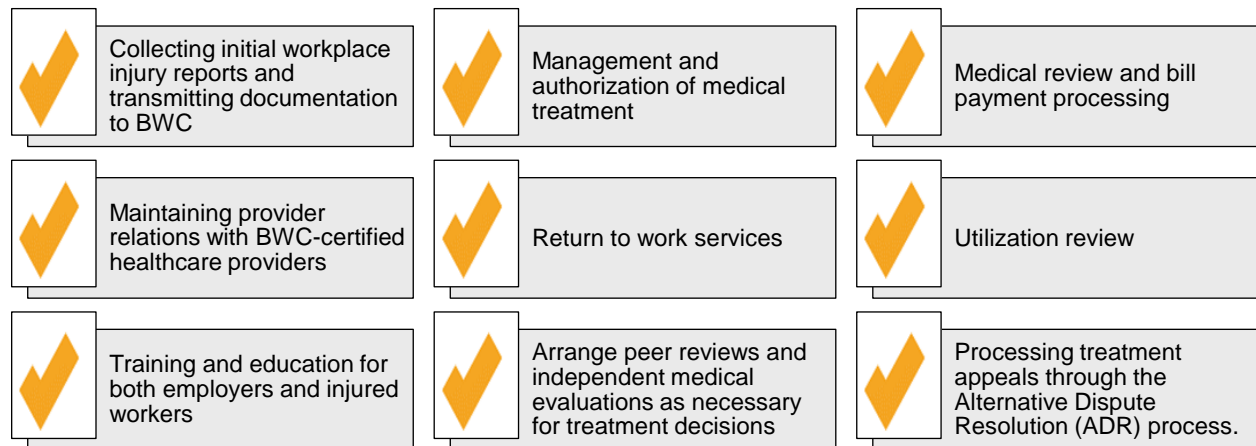


## **Deliverable 5: Comparative Analysis of BWC's Current Approach to Procurement of Medical Management Services**

# 1 EXECUTIVE OVERVIEW

In 1997, the Health Partnership Program (HPP) established Ohio's current managed care system with the intent of developing an efficient, cost-effective delivery system, so that Ohio injured workers would receive appropriate, timely treatment for work-related injuries. Managed Care Organizations (MCOs) were charged with providing medical management and return to work services for all work-related claims. The focus was to bring system efficiencies and reduce costs.

MCOs are accountable for providing Return to Work services, First Report of Injury (FROI) Processing, Utilization Review, Medical Management, Alternative Dispute Resolution, Provider Arrangements, Provider Bill Review, Provider Bill Payment, arranging Peer Reviews and Medical Evaluations, and Employer, Employee and Provider Education with a focus on Return to Work for all work-related claims. The MCO contract, including the appendices and MCO Policy Reference Guide (MPRG), provide detail regarding the MCO's medical management and return to work roles and responsibilities. These responsibilities must be compliant with Chapter 4123-6 of the Ohio Administrative Code and the Bureau's Provider Billing and Reimbursement Manual (BRM). Lastly, MCOs must be certified by the American Accreditation HealthCare Commission (URAC) to serve as a basic indicator that they are able to function as a case management organization and comply with their case management services standards.



This deliverable is focused on the procurement of medical management services from MCOs. Procurement identifies all the terms and conditions of a contractual relationship. For example, procurement may include performance expectations and delineation of duties and responsibilities of each party to the contract.



The current procurement process with the BWC involves a period of contract negotiations between the BWC and the MCOs, resulting in the contract. Presented here is a review of contractual requirements for quality assurance, contract performance expectations and benchmarks, comparison to other states' worker's compensation systems, alternative procurement strategies, identification of successful procurement alternatives, and payment and incentive strategies. In our analysis, we will also weigh the pros and cons of different procurement processes.

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## 3 DELIVERABLE 5 OVERVIEW

### 3.1 Report Aims and Organization

The following report will seek to draw comparisons to other insurance and worker's compensation markets and comprehensively evaluate opportunities to further optimize the procurement of medically managed care in the State of Ohio.

This document outlines findings that meet the goals and objectives stated in the Scope of Work for Deliverable 5.

**Aim 5.1** – Research current and historic BWC procurement strategies, perform a review of the managed care industry and other state workers' compensation programs.

**Aim 5.2** – Utilizing the findings of Aim 5.1, identify and present potential procurement improvement strategies for BWC consideration.

The work product delivered in this report will address items discussed in the Scope of Work, the Deliverable 5 analytic document, and associated agreement form, complemented with specific areas identified as impactful in the course of conducting the research for each for the two aims included in this report.

### 3.2 Definitions, Acronyms, and Abbreviations

The first-time usage of any term, acronym, or abbreviation within this document are defined in the table below.

Abbreviation	Definition
ADR	Alternative Dispute Resolution
BRM	Billing and Reimbursement Manual
BWC	Bureau of Workers' Compensation
COHE	Centers for Occupational Health and Education
DMP	Designated Medical Providers
FROI	First Report of Injury
HEDIS	Healthcare Effectiveness Data and Information Set
HMO	Health Maintenance Organizations
HPP	Health Partnership Program
MCO	Managed Care Organization
MoD	Measurement of Disability
MPRG	MCO Policy Reference Guide
NCQA	National Committee for Quality Assurance

ODM	Ohio Department of Medicaid
P4P	Pay-for-Performance
RFT	Request for Tender/Bid
RFP	Request for Proposal
RMWCP	Risk Management Workers' Compensation Program
SAM	Safety Action Memo
TDI	Texas Department of Insurance
URAC	Utilization Review Accreditation Commission
WCRI	Workers' Compensation Research Institute
WSI	Workforce Safety and Insurance

## **4 REVIEW OF CURRENT AND HISTORIC PROCUREMENT STRATEGIES**

Sourcing is the identification of desired goods and services (medical management), including the process of procurement. Procurement is concerned with the logistics of acquiring goods or services. Specifically, procurement identifies all the terms and conditions of a contractual relationship. For example, procurement may include performance expectations and delineation of duties and responsibilities of each party to the contract. This section will review contractual quality assurance monitoring requirements and contractual performance benchmarks. Additionally, this section will compare worker's compensation programs and payment and incentive programs in other states.

### **4.1 Contractual Requirements for Quality Assurance Monitoring**

The BWC/MCO contract, along with the MPRG, the Ohio Administrative Code, the Billing and Reimbursement Manual (BRM), and the required URAC certification provide the mechanisms to monitor the quality of services. Quality includes adherence to all standards that have been established and detailed in the contract, as referenced below. For activity-oriented processes, the MCOs are issued a report either weekly, monthly, or quarterly, depending on the activity, as to adherence to standards. In addition, periodic audits, both on-site and off-site, are performed by the BWC to ensure compliance and annual SSAE18/SOC1 audits are required from an auditor. For non-process related activities, such as medical case management and development of appropriate care plans, MCOs are required to obtain and maintain URAC certification and are subject to on-site audits by the accrediting organization. The BWC also conducts audits related to medical management, financial activity and compliance.

We reviewed quality requirements for Ohio and compared them to other states where MCOs are present in the Workers' Compensation system in the table on the following page. The state of Ohio, along with Florida and West Virginia, require the greatest number of mandatory elements for managed care arrangements. As Ohio is a monopolistic state with MCOs, these regulations benefit the injured worker and employer by ensuring minimum standards are met in lieu of market forces that would otherwise manage risk.

Requirements for Approved Managed Care Organizations											
State	Approval or Certification Required	Numbers and Location of Medical Providers	Specialties that Must be Included	Utilization Review	Case Management Services	Use of Treatment Guidelines	Internal Dispute Resolution	Quality Assurance Program	Patient Education	Office Staff Education	Provider Education
AR	Yes	x	x	x	x	x	x	x	x		x
CA	Yes	x	x	x	x	x	x	x			
CO	No										
CT	Yes	x		x		x	x		x		x
FL	Yes	x	x	x	x	x	x	x	x	x	x
GA	Yes	x	x	x	x		x	x	x	x	
KT	Yes	x	x	x	x	x	x		x		x
MN	Yes	x	x	x	x	x	x			x	x
MT	Yes	x	x	x	x	x	x	x	x		
NE	Yes		x	x	x	x	x	x			
NH	Yes	x	x		x	x	x	x			
NJ	Yes	x	x	x	x		x	x			
NY	Yes	x	x	x	x	x	x	x	x		x
NC	Yes	x	x	x		x	x	x	x		
ND	Yes			x		x	x				
OH	Yes	x	x	x	x	x	x	x	x	x	x
OR	Yes	x	x	x	x	x	x	x			x
PA	Yes	x	x	x	x	x	x	x	x		
RI	Yes										
SC	Yes										
SD	Yes			x	x	x	x	x			
TN	Yes			x	x	x					
TX	Yes	x	x	x	x	x	x	x	x		
UT	No	x	x	x	x	x	x				
WV	Yes	x	x	x	x	x	x	x	x	x	x

Table modified from "Workers' Compensation Research Institute Annual Report 2017."

## **URAC**

The intent of HPP is to create a managed care system that will provide a safe, timely, and sustained Return to Work for the injured worker in the most efficient, cost-effective manner, thereby reducing cost to Ohio employers. To better serve the injured worker, MCOs must be proactive in identifying the injured workers' current treatment needs, as well as anticipating their future needs. It is important to note that effective case management in the workers' compensation arena also includes the needs of the employer. The key to success is a comprehensive treatment plan for the injured worker that defines both short-term and long-term treatment and return-to-work goals. This includes proper assessment of the injured worker's current condition and may require a site visit by the case manager. Once the injured worker understands and agrees to the goals, a comprehensive treatment plan is developed with the end goal being return-to-work. This proactive and anticipatory approach is the corner stone of any effective case management function and is clearly outlined by the Utilization Review Accreditation Commission (URAC) as a core standard.

The current BWC procurement process identifies this essential aspect of case management by including the requirement that the MCOs be URAC-certified and knowledgeable of URAC case management protocols. Ohio is the only state that requires URAC certification for MCOs. Other states, such as Oregon, do not require third party certification and instead rely on on-site surveys and audits to evaluate medical management.

One of the mechanisms of ongoing quality assurance monitoring is the requirement that MCOs achieve URAC certification. In requiring this certification, it was the BWC's goal to achieve consistency of case management practices, as defined by the accrediting body; and, assurance the MCOs have a basic understanding of what should be contained in an effective case management plan. As part of the certification, MCOs are subject to audits conducted by URAC representatives, both announced and unannounced. Ohio's use of URAC is greater than or equal to medical management review regimes used by other states and meets the requirements of the HPP.

## **MCO Reviews and Audits**

To further ensure adherence to quality standards, the MCOs are subject to a number of audits, conducted by the BWC and independent auditors that must complete a SSAE/18 SOC 1 Type 2 Report. These audits focus on the functional areas of medical management, information systems, finance, physical security, and business operations. Ohio's use of surveys and audits is in line with best practices for enforcement of quality assurance requirements as reflected in "Workers' Compensation Medical Cost Containment: A National Inventory, 2018". These data are used to compare costs, quality, and appropriateness and effectiveness of medical care by the MCOs.

## Summary

The BWC has demonstrated the contract contains appropriate mechanisms of ongoing quality assurance monitoring and is using methods that represent best practices when compared to peer states, both through the requirement of URAC certification and audits to enforce quality medical management.

## 4.2 Contract Performance Benchmarks

While URAC certification and audits ensure quality of medical management, to meet the objectives of the HPP to provide efficient, cost-effective care, MCOs must also be measured on their ability to deliver and report on services in an accurate and timely manner.

The services to be delivered by the MCOs are clearly defined. The services include FROI Processing, Utilization Review, Medical Management, Case Management, Alternative Dispute Resolution, Provider Arrangements, Provider Bill Review, Provider Bill Payment, and Employer, Employee and Provider Education with a focus on Return to Work for all work-related claims.

The performance expectations for delivering these services are well clarified within the BWC/MCO contract, the MPRG, the Ohio Administrative Code, the BRM, and the URAC standards.

MCO Responsibility	Activity
Collecting initial workplace injury reports and transmitting documentation to the BWC	FROI timing FROI data accuracy
Medical review and bill payment processing	Bill timing Provider bill data accuracy Inpatient hospital bill payment accuracy

These five activities represent BWC policies designed to strengthen the system and maintain alignment with known best practices. For example:

- **FROI timing:** expedites an early start to medical management (known to be best practice for injured worker medical management)
- **Bill timing:** helps ensure provider payment to support the provider's continued participation in the system
- **Bill data accuracy:** helps to ensure that decisions on the bill are made quickly and accurately and avoid unnecessary delays

All process measures help to monitor areas where the BWC feels the MCOs should apply additional due diligence. FROI timing and FROI data accuracy ensure the injured worker is treated quickly. Timing and accuracy of billing ensures employer premiums are used efficiently. These MCO responsibilities provide the foundation for medical management and are a clear measure of the objectives of the HPP. The specific benchmarks and penalties are discussed in Deliverable 4.



## **4.3 Comparison Strategies of Other State Workers' Compensation Programs – Monopolistic States and Non-monopolistic States**

As the BWC explores innovative strategies to consider for the Ohio Workers' Compensation managed care program, it is beneficial to know more about other state programs. This summary is meant to provide insights regarding Workers' Compensation initiatives in other states.

Ohio is among four states that have a monopolistic system. The other three states are North Dakota, Washington, and Wyoming. Being monopolistic offers an advantage to a state in being able to unilaterally implement programs that will benefit the injured worker and help reduce employer premiums. This study looks at a sampling of state workers' compensation initiatives which are: monopolistic, non-monopolistic states that require managed care, and non-monopolistic states that do not require workers' compensation coverage for employees.

### **Monopolistic State Initiatives**

#### **North Dakota**

##### **Focus: Utilization of Designated Medical Providers**

North Dakota's state-run program is administered by the Bureau of Workforce Safety and Insurance (WSI). It is one of only four states that mandate managed care in the delivery of healthcare services according to the 2015 Texas Department of Insurance study of Workers' Compensation. The other three are Colorado, Ohio, and South Dakota.

All employees engaged in hazardous employment in North Dakota must be covered by Workers' Compensation insurance. Anyone whose coverage is not mandated by law to be covered by the state bureau may be covered at the election of the employer and upon payment of the appropriate premium into the state insurance fund.

North Dakota's Risk Management Workers' Compensation Program (RMWCP) has selected state-wide occupational health specialists to serve as the program's Designated Medical Providers (DMPs), although the state does not do any direct provider contracting. The occupational health specialists are located in medical facilities (including satellite care centers) across North Dakota. They employ registered nurses as case managers to assist injured workers who seek medical treatment. These nurses assist with coordinating care and determining medical necessity and appropriateness; provide recommendations; act as a liaison between the injured worker, employer, medical provider, and Workplace Safety and Insurance (WSI) claims adjuster; and, assist in the coordination of transitional work. If an employer selects a state-approved risk management program, they can direct their employees' care to one of the "preferred providers."

Employers may choose a single provider, a group of providers, or any combination of provider specialties. While employers can choose any combination of providers as their DMP, employers are encouraged to select providers with the knowledge and training to work

occupational injuries specific to their industry. The selection of a DMP is a requirement to participate in the Safety Action Memo (SAM) Discount Program.

Employers who use one of the Program's DMPs can expect to see reduced cost associated with their employees' claims, a discount in workers' compensation premiums, and the elimination of the \$250 deductible cost associated with workers' compensation claims.

North Dakota also initiated safety programs and an Ergonomic Initiative Grant focusing on safety and injury prevention. The Safety Training & Education Program (STEP) is a program where approved associations and employee associations can get grant monies for training and education.

## **Summary**

1. Certified occupational health specialists deemed as Designated Medical Providers (DMPs) work in medical facilities throughout the state.
2. Employers who choose an approved risk-management program, can direct the care of their employees.
3. Employers who choose a DMP can receive a premium discount.
4. Focus on Safety and Injury Prevention.

North Dakota does not have a comprehensive managed care program such as HPP, but instead relies on clinical providers to serve as case managers and injured workers can be directed to receive their care from a preferred provider. As Ohio's managed care program is not provider-based and injured workers are not directed to certain providers, but have choice of providers for receiving care, North Dakota's DMPs and SAM program are not suitable for the Ohio environment. Ohio depends on MCO case managers to work with the providers to ensure proper care is provided for the injured worker.

## **Washington**

### **Focus: Return to Work and Safety Programs, System Efficiencies, and Best Practice Providers**

Virtually all employees, both public and private, must be covered by workers' compensation insurance. Exempt (self-insured) employers may elect to provide coverage, but no employer or employee may elect not to be covered. The program is administered through the Washington Department of Labor and Industries. The main focus is returning the injured worker to work, as well as injury prevention, system efficiencies, and best practice providers.

Various initiatives are in place to focus on returning injured workers to the workforce as soon as possible. The Stay at Work Program offers financial incentives (discounts) for employers to keep injured workers on the job doing light duty work while they are recovering

from their injury. Vocational Services have been modified to encourage vocational case managers to get involved earlier in the claim process.

To improve medical management, initiatives were taken to decrease claims processing times, including increased staff and a management system to increase efficiency. They strengthened their medical provider network, including the creation of a 'top tier' level of providers who had proven certain occupational health best practices. The creation of the Centers for Occupational Health and Education (COHEs) was the pilot for inclusion of the new best practices, with the goal of reducing the rate of long term disability claims.

Safety initiatives in Washington, include the logger safety initiative, with the goal of reducing injuries in the logging industry. The Safety and Health Investment Project (SHIP) provides for grants to employers for ideas on reducing injury rates and returning injured workers to the job.

## **Summary**

1. Stay-at-work discount program for transitional work.
2. Vocational rehabilitation staff and resources increased.
3. Claims management system improved.
4. Provider network strengthened by designating "Top Tier" providers.
5. Centers for Occupational Health and Education created with a focus on reducing Long Term Disabilities.

Washington's program is provider-based and depends on designated providers to direct the care of the injured worker. However, medical case management continues to be performed by the State. Ohio's program is not provider-based and allows injured workers freedom of choice of providers. To meet the objectives of the HPP, MCOs perform the case management function and work with the injured workers and the providers to ensure the injured worker has all necessary and appropriate care. While the COHEs present an opportunity for the use of best practices, in Ohio, this responsibility falls on the MCOs to promote with their providers and may provide an opportunity for a competitive advantage.

## **Wyoming**

### **Focus: Premium Discount Programs**

Workers' Compensation Insurance is administered by the Workers' Safety and Compensation Division of the Wyoming Department of Employment. All workers employed in "extra-hazardous" occupations must be covered by workers' compensation insurance. Wyoming law specifies some 80 extra-hazardous occupations and an extra-hazardous industrial classification. Almost every occupation is included, although office work is only covered if it is performed in any of the specified industrial classifications. If the occupation is not one of the covered occupations, private insurance must be provided by the employer.

Everything is administered through the Workers' Safety and Compensation Division. Employers can reduce their premiums by participating in various discount programs. Discounts of 10% are available for instituting drug testing and screening. An additional 10% is available for health and safety programs that includes an established health and safety committee.

### **Summary**

1. Employers can receive a 10% discount of implementing Drug Testing and Screening.
2. Employers can receive up to a 10% discount for implementing a Health and Safety Program.

Wyoming has no managed care program to compare with Ohio's HPP. They do encourage safety and injury prevention. Ohio goes beyond discount programs for safety and injury prevention and actively works with employers to establish appropriate programs at the workplace.

## **Non-monopolistic States Initiatives that Require a Form of Managed Care**

### **Colorado**

#### **Focus: Preferred Provider for Initial Treatment**

All employers in Colorado must provide workers' compensation coverage for their employees through either self-insuring or private insurance. The employer has the right to select the initial treating provider. In addition, the employer's insurance carrier must offer a managed care plan to the employer if there is an MCO in the employer's geographic area. Insurers that do not offer full managed care must offer medical management services.

### **Summary**

1. Insurers must offer a managed care plan to employers, if geographically available. If not, they must offer managed care services.
2. Employers can direct care for the initial treating provider.

Colorado does not have a state-run program and delegates workers' compensation responsibility to the employers who can purchase coverage from a private insurer. Any managed care provided by a carrier would include risk-based elements, such as directing care to network providers. Ohio's HPP has managed care, but does not direct care and ensures the injured worker choice of provider. While employer-directed care could lead to cost savings, it would reduce injured worker choice.

## **Other Non-Monopolistic State Initiatives Where Managed Care is Not a Requirement**

### **Arkansas**

#### **Focus: Certified MCOs in Private Insurance Market**

All employers are required to provide workers' compensation coverage and must either purchase coverage from the private insurance market or become self-insured. There is no state program. However, in 1996, the Arkansas legislature authorized the formation of MCOs in the private market. Arkansas certifies an MCO who then contracts with the insurers and/or employers. If the employer or its insurer is in contract with an MCO, they have the right to direct care and the injured worker must receive care from a provider within the MCO network.

An MCO can be formed by either an insurer, employer, or self-insured employer. The injured worker has limited freedom of choice when receiving services with the MCO and care can be directed to network providers.

In addition, effective July 1, 2018, Arkansas legislature authorized a drug formulary that regulates all outpatient medications prescribed for work-related injuries. The rule draws on a formulary already in use for state government employees who are injured on the job. In 2018, Arkansas put an emphasis on opiates by including them in the formulary based on guidelines established by the Centers for Disease Control and Prevention.

#### **Summary**

1. State authorizes the formation of managed care organizations which contract with the employer or its insurer.
2. Employee care can be directed by the MCO.
3. Drug formulary has a focus on opiate use.

Although the MCOs are a vital part of the Arkansas program, the State of Arkansas delegates the responsibility of contracting with and paying for the MCO services to either the employer or the employer's insurer. In Ohio, the employer may not contract directly for workers' compensation managed care coverage outside of the state-run program, unless self-insured. The Arkansas model does not require meeting the HPP expectations for services important for Ohio injured workers.

### **Oregon**

#### **Focus: Authorizes MCOs in Private Markets**

All Oregon employers are required to carry workers' compensation insurance obtained through private insurers. Currently, there are more than 400 companies approved to sell workers' compensation insurance.

To reduce rising workers' compensation costs, in 1990, the legislature authorized the use of MCOs to provide medical care for injured workers. These MCOs seek to reduce unnecessary care through the use of gatekeepers. MCOs perform utilization review, bill review, and case management. They also create incentive programs for providers. The MCOs are similar to health maintenance organizations (HMOs) in their use of preferred provider panels and utilization review, but are not certified as health care providers under Oregon Insurance Code. MCOs cannot be formed by, owned, or operated by insurers, or by the employers unless they are health care providers or medical service providers.

There are two types of MCOs – hospital-based MCOs and medical provider-based MCOs. The MCOs contract directly with insurers to provide services to employers within specified geographical service areas. In 1995, the legislature changed the program to require that injured workers receive care within their MCO, even if the insurer had not yet accepted the claim. Prior to this change, the injured worker had the right to choose their own provider at the time of injury until the insurer accepted the claim. The MCOs must offer certain services and processes, but may then delegate other functions to the insurers.

As part of the certification process, MCOs must demonstrate adequate provider coverage, document how the MCO will obtain, develop, and update treatment standards, and provide utilization review, peer review, and dispute resolution services.

After the first two years of the program, two MCOs were decertified. One because of low volume and the second because they were not able to contract with insurers. Currently, there are four MCOs: Kaiser On-The-Job, CareMark Comp, Majoris Health Systems Oregon, and Providence.

The financial arrangements are two-pronged – payment by the MCO to the health care providers and payment to the MCO by the insurer. Payment arrangements between the MCO and the insurer usually fall into three categories: fixed fee, volume-based fee, or performance-based fee. A fixed fee involves an agreement to provide a basic package of MCO services for a negotiated fee, regardless of the number of injured workers enrolled in the MCO. Volume-based fee agreements are flat fees per covered employee, enrolled claim, or type of claim. Performance-based fee is tied into time loss or medical cost experience or fees based on the sharing of any claims loss reduction below a target schedule.

## **Summary**

1. Creation of MCOs, hospital-based or provider-based, that contract with insurers.
2. Employees must receive care from MCO providers.

The Oregon model shifts full risk to the insurers. The insurers in turn work with provider-based MCOs within one of three reimbursement models: full-risk, partial risk, or non-risk. MCOs utilize preferred providers, or “gatekeepers,” and injured workers must receive care through a preferred provider. Since the Oregon model shifts risk to the insurers, this does not fit with the monopolistic structure, as seen in Ohio. However, Ohio might want to consider adopting these types of reimbursement models to directly transfer risk to the MCOs. If the BWC wants to pursue risk agreements with the MCOs, the Ohio Department of Insurance regulations

regarding risk-bearing organizations would need to be carefully examined and considered, along with freedom of provider choice stipulations.

## **Texas**

### **Focus: Certified Healthcare Networks**

Texas is a state that does not require employers to carry workers' compensation coverage. However, for those employers who wish to cover their employees they may choose from one of approximately 30 Certified Workers' Compensation Healthcare Networks that are regulated by the Texas Department of Insurance (TDI) to medically manage their work-related injuries.

Certain public entities and political subdivisions (such as counties, municipalities, school districts, junior college districts, housing authorities, and community centers for mental health and mental retardation services) have the option to: use a workers' compensation health care network; continue to allow their injured employees to seek health care as non-network claims; or contract directly with health care providers if the use of a certified network is not available or practical, essentially forming their own health care network.

## **Summary**

1. State-certified Workers' Compensation Healthcare Networks are available which employers may access to medically manage their claims.

The State of Texas does not require workers' compensation coverage. However, the Department of Insurance has made available certified networks of medical providers that can work with employers. The BWC could consider organizing similar provider networks and make them available to the MCOs for usage. MCOs could use their ability to develop a trusted provider network as an opportunity to bring value to the system through development of a network of known, high-quality providers. However, choice of provider is currently still an injured worker's choice.

## **Discussion Summary**

The above discussion includes states that require employers to provide workers' compensation coverage, either through a state fund or private carriers, and those that do not require coverage. However, if coverage is provided the states often require or offer some form of managed care to be utilized in the care and treatment of work-related injuries.

In comparing Ohio's HPP to other state programs, it is clear that no other state identified has adopted the comprehensive approach to controlling workers' compensation cost as Ohio

has done. Ohio's current program includes medical management of injuries, workplace safety and injury prevention programs, along with employee, employer and provider education. When compared to the other states, Ohio has taken the lead in comprehensive successful workers' compensation solutions.

To further increase MCO's ability to better manage the care of injured workers, MCOs could be encouraged to increase focus on the development of curated, trusted provider networks in order to bring additional competitive value to the system. While the BWC requires providers to be certified to treat injured workers, allowing MCOs to curate provider networks would provide an added level of quality assurance and control. This change would require a change to the Ohio Administrative Code regarding employee choice of provider in order to be more in line with traditional managed care environments.

## **4.4 Payment and Incentive Strategies within Ohio compared against other States or Insurers**

The BWC has moved away from the original process-based contract into a contract that reimburses MCOs 50% for administrative processes, and 50% for outcome-based performance centered on Measurement of Disability (MoD). Additional performance incentives were added that deal with Medication Management, Transitional Work, Vocational Rehabilitation, Legacy Return to Work, and Wellness Programs. The BWC establishes the annual budget amount of payment to the MCOs for their services and incentive programs. This payment methodology is unique to Ohio.

In the Medicaid market, states continue to struggle with increasing costs, variation in treatment patterns, and physician performance. Pay-for-Performance (P4P) is utilized to clarify desired outcomes for medical management and measures the care delivered to over 50 million members. P4P began in the private sector but quickly crossed over to the public sector to incentivize health plans. The use of these payment methodologies and incentives encourage quality improvement and patient-focused care.

There are five goals in the use of P4P:

- 1) Reward high-quality care.
- 2) Reduce variation in patterns of care.
- 3) Improve performance on specific measures.
- 4) Support broader quality strategies, including value-based purchasing.
- 5) Improve access to care and support for the safety net.

As identified by the Common Wealth Fund, there are currently over 115 P4P programs utilized by Medicaid/Medicare, which can take a variety of different forms. The main approaches include monetary incentives, such as premium bonuses or penalties, or public reporting of comparative quality. While not all of these goals are directly applicable to the Ohio BWC, the underlying expectations meet the needs of the HPP as a method to clarify desired responsibilities and incentivize improved medical management for efficient, cost-effective care. The extent to which P4P can improve the system requires the willingness to develop standards and



tie performance to real consequences. The BWC has implemented similar incentive programs and reporting mechanisms with the Exceptional Performance Incentives and the MCO report card. We believe an area of opportunity exists to implement Nationally Recognized Quality Standards such as Healthcare Effectiveness Data and Information Set (HEDIS) to clarify and measure exceptional medical management and allow for cross-industry comparison. HEDIS is a set of performance measures which monitor performance in the Managed Care industry. This set of measures is developed and maintained by the National Committee for Quality Assurance (NCQA) and allows for comparison between health plans and to national or regional benchmarks.

As reported earlier, Ohio is unique in that it is the only state that contracts directly with MCOs for workers' compensation medical management services. Other states rely on either the employer or the insurer to develop these contractual relationships. In Oregon, the Preferred Worker Program incentivizes employers for re-employment of permanently disabled injured workers. The employers receive hiring incentives, wage subsidies, premium exemption and work place modifications to assist in the re-employment. This is similar to the transitional work program in Ohio.

Since other states rely on private insurance entities for the provision of workers' compensation medical managed services, risk and liability are transferred to either the employer that is self-insuring, or the contracted private insurer. Therefore, incentives and disincentives are inherently built into the payment methodology. In Ohio, since the BWC pays for medical care, cost savings are realized by the State Fund rather than the MCOs. Incentives and disincentives serve as a proxy for the risk and liability found in full-risk systems. As the Ohio BWC system contains elements of both a monopolistic state and commercial market, it requires a hybrid of both permissive and prescriptive components wherein the MCOs are incented for outcomes while compensated for State mandated activities. This will necessarily be a process of negotiation during the procurement process.

## **Pros and Cons of Introducing Different Procurement Processes**

### **Historic and Current Environment**

HPP introduced a managed care environment into the workers' compensation system. The intent of the HPP was:

- 1) Create a system where efficient, cost-effective care is delivered to Ohio injured workers.
- 2) Offer Ohio employers choice in selection of MCO.

The BWC has outsourced the medical management of injured worker claims. Specifically, the MCOs are to perform the following duties: FROI Processing, Utilization Review, Medical Management, Case Management, Alternative Dispute Resolution, Provider Arrangements, Provider Bill Review, Provider Bill Payment, and Employer, Employee and Provider Education with a focus on Return to Work for all work-related claims. The expectations of how the MCOs are to perform these duties are clearly defined in the BWC/MCO contract, the MPRG, the Ohio

Administrative Code, the BRM, and URAC standards. In addition to the specifics outlined above, the MCOs are given a certain amount of latitude in performing their medical management services, and are measured by the BWC for positive medical management outcomes. This combination of prescriptive and permissive outcome-based management comprises the current BWC/MCO contractual relationship and allows for a certain amount of market innovation among the MCOs.

Ohio is unique in that it is the only state that contracts directly with MCOs for workers' compensation medical management services. Other states rely on either the employer or the insurer to develop these contractual relationships, or alternatively provide no managed care services for work related injuries.

One of the challenges Ohio faces as a monopolistic state that outsources medical management to MCOs is that some of the tools traditionally available to MCOs in a commercial market are not available. In terms of prescriptiveness of contract terms, the amount of MCO operational prescriptiveness varies by state and by program. If the program involves a government entity besides the licensing entity, terms tend to be more prescriptive. In the private market, the employer purchases coverage based on premium amounts and is not involved in defining the insurer's day-to-day operations. In Ohio's BWC environment, where both state and commercial business paradigms compete, both parties must work closely together to meet the needs of the injured workers and employers in a fiscally responsible way. The following sections will include a discussion of the current procurement process and opportunities.

In response to this, the BWC developed a process for certifying MCOs and offered a negotiated contract to all MCOs who had become BWC-certified. The first contract focused on bringing about cost reduction and process improvement. Since that first contract, the focus of the MCO contract has evolved to include various outcome measures and exceptional performance incentives. The BWC establishes the price and performance expectations and any certified MCO which wants to accept the terms and conditions is awarded a contract.

In addition, to enhance the contracting process, the BWC continually seeks input from the MCOs, pulling on their private sector managed care expertise. This is accomplished through several methods including, but not limited to quarterly business council meetings, quarterly MoD meetings, and periodic "fireside chats." MCOs also have input into MPRG changes throughout the contract.

The current procurement process accomplished several goals of HPP: delivery of efficient, cost-effective services, giving Ohio employers' choice, and building on the public-private partnership. However, there are other procurement strategies available.

### **Request for Tender/Bid (RFT)**

With an RFT, price is usually the primary factor being considered and is most applicable when procuring commodity products. This is because the product or service involved in the procurement is standard or has been properly established in its dimensions through a prior request for information. With price being the primary focus of the bid request, the character of the deliverable for the potential client changes dramatically from a proposal. In short, an RFT is used when looking for a vendor at the lowest price.

## **Request for Proposal (RFP)**

RFPs are most often qualitative in their focus. In other words, they focus on the types of services or the qualities of a product that is being delivered. Price is a factor but usually not the only factor. An RFP is used for finding a vendor with the best services, regardless of price and the actual process can take many forms.

## **Directed Negotiations**

Directed negotiations are currently used for contract procurement by the Ohio BWC for MCO medical management services. This method is best suited for negotiations in mature markets where participants are pre-qualified and services are well defined. One of the drawbacks to this method is that it does not incentivize innovation on the part of the MCOs. Since the starting point for procurement is the previous year's contract, it over emphasizes the status quo, but ensures continuity in the care of injured workers. While the BWC has historically sought MCO feedback and concerns during contract preparation, the process is largely deadline driven as both parties seek to maximize their benefit. Despite anecdotal evidence that the contract negotiations have been fraught with tension, there is no evidence that this has negatively affected the system.

In Deliverable 2 however, stakeholders perceived an inconsistent or unpredictable business model. MCO interviewees interpreted the BWC relationship to vary between MCO as a "vendor" or "partner" when advantageous to the BWC. Equally, BWC interviewees interpreted MCO self-identified relationship to vary between MCO as a "vendor" or "partner" when advantageous to MCO. Nevertheless, no MCO has left the system due to negotiations.

There are variant models within both RFT and RFP, but for simplicity we are looking at the broader category of each. In developing the method for procuring MCO services, the Ohio BWC focused on both costs and service quality

The following chart outlines the advantages and disadvantages of the procurement methods: <b>ADVANTAGES AND DISADVANTAGES OF VARIOUS PROCUREMENT METHODS</b>		
Method	Advantages	Disadvantages
<b>Open Tendering</b>	<ul style="list-style-type: none"> <li>• Fosters effective competition</li> <li>• Open to all qualified and interested bidders</li> <li>• New MCOs could enter the market</li> <li>• Encourages planning via the required documentation of detailed needs and contract specifications</li> </ul>	<ul style="list-style-type: none"> <li>• Lengthy timeframe for completion of the procurement</li> <li>• Focuses primarily on a low-cost solution</li> <li>• Suppresses innovation</li> <li>• Excessive formalism may limit supplier participation in the tendering process</li> <li>• Inexperienced or unknown MCOs can enter the market</li> </ul>
<b>Request for Proposal (RFP)</b>	<ul style="list-style-type: none"> <li>• Lessens the appearance of favoritism</li> <li>• Can help to negotiate a lower cost for the project</li> <li>• Can help determine if part of the project is better suited for the internal team based on vendor feedback</li> <li>• Can help reduce the number of MCOs, if desired</li> <li>• Contributes to a clear vision of what is needed and by what deadline</li> <li>• Provides evidence of a fair selection process</li> </ul>	<ul style="list-style-type: none"> <li>• Increased bureaucracy</li> <li>• Requires a formal screening process multiple reviews, meetings, presentations and follow-ups</li> <li>• Takes time</li> <li>• May require a Q &amp; A session to answer queries from prospects developing responses</li> <li>• May nix the participation of a good vendor prospect who thinks response development is too costly and low yield</li> </ul>
<b>Directed Negotiations (Current BWC methodology)</b>	<ul style="list-style-type: none"> <li>• Flexibility in defining what a service is or will include</li> <li>• Negotiations start with existing contract which ensures continuity</li> <li>• Ensures that minimum requirements are met</li> <li>• Provides an opportunity for feedback and discussion</li> <li>• Open to all qualified and interested bidders</li> </ul>	<ul style="list-style-type: none"> <li>• Can permit too much leeway in defining services</li> <li>• Overemphasizes the status quo</li> <li>• Procurement is deadline driven</li> <li>• Suppresses innovation</li> <li>• Focuses on eliminating loopholes</li> </ul>

## Discussion

The goals of HPP are to create a managed care system that delivers effective, cost-efficient care for Ohio's injured workers and employers. To further this goal, the BWC should continue the procurement of medical management services, utilizing performance as a key

indicator. The procurement method utilized should be determined by defining the needs of the BWC and the managed care program.

Consideration of RFT appears to go against the quality goals of HPP given the lack of evaluating the needed services to identify quality providers. While RFT fosters price competition between bidders, it requires an overly prescriptive set of services and requirements which stifle innovation. RFT may be appropriate for certain processes provided by the MCOs, such as claims processing where there are highly defined set of requirements. However, it would be ineffective in the procurement of medical management.

In using a RFP, the document outlines the bidding process and contract terms, and provides guidance on how the bid should be formatted and presented, as well as the evaluation criteria that will be used to grade the proposals. RFPs are very specific and are a request for services for a specific program. They may require the BWC to review the bids to not only examine their feasibility, but also the health of the bidding company and the ability of the bidder to actually do what is proposed. Using the RFP process can create competition in bidding, but also may inherently have quality issues when based on price. The RFP process is generally geared to a selection process that will reward a sole vendor the project; however, contracts may be awarded to multiple vendors, depending on the needs of the agency.

Medicaid and Medicare programs have historically used the RFP method of procurement when recruiting and contracting with MCOs to provide healthcare services to their constituents. Often a scoring system is applied and the number of “winners” are limited. The Ohio Department of Medicaid (ODM) contracts with MCOs for the delivery of care through the use of an RFP. All licensed and interested MCOs respond to the RFP and ODM ranks the respondents based on criteria identified and scored by level of importance. Contracts are awarded to the top qualifiers and all MCOs may not be selected. At the end of the contracts term, this same process is repeated for the purposes of retaining and renewing contracts with the selected MCOs.

Applying this to the BWC could result in reducing the number of participating MCOs. The disadvantages could be disrupting established employer/MCO relationships through the elimination of certain MCOs. Injured workers with open claims could also be affected. However, it is critical to note that the RFP process, as used by ODM, does not have to result in MCO reduction and does leave open the option to award contracts to all qualified MCOs.

## **Recommendations**

Based on the historical perspective of contract development and contract negotiations between the BWC and the MCOs, the current sourcing method is meeting the needs and objectives of HPP. Consideration of RFT appears to go against the quality goals of HPP given the lack of evaluating the needed services to identify quality providers. While the current process of contract negotiations is meeting the overall needs of the HPP, we believe that an RFP process could provide an opportunity to determine if part of the project is better suited for the internal team and contributes a clear vision of what is needed for injured workers and employers or whether it is better suited for an external vendor. Rather than the BWC stipulating specific quality measures, the BWC could request proposals from MCOs on how they will

monitor and report quality in medical management. For example, MCOs could propose to implement national quality benchmarks, such as HEDIS, to identify best practices and exceptional medical management.

## 5 EXECUTIVE SUMMARY

This deliverable focuses on the procurement of medical management services from MCOs. The current procurement process involves a period of contract negotiations between the BWC and the MCOs, with the result being a contract.

In comparing Ohio's HPP to programs in other states, it is clear that Ohio is in the forefront for their approach to controlling workers' compensation costs. Ohio's current program includes medical management of injuries, workplace safety and injury prevention programs, along with employee, employer and provider education. The BWC has demonstrated that the MCOs' contract contains appropriate mechanisms of ongoing quality assurance monitoring and is using methods that represent best practices when compared to peer states, both through the requirement of URAC certification and audits to enforce quality medical management.

While the BWC currently uses a directed negotiation method for contract procurement, there is an opportunity to enhance the existing procurement process by including elements of an RFP process to address specific policy goals. For example, requiring proposals to address how the MCOs will approach quality such as the implementation of national quality benchmarks.

Another opportunity to give MCOs more tools to medically manage injured workers could be allowing the MCOs to develop curated, trusted provider networks. This would enable the MCOs to more effectively negotiate costs with potential providers which would have the direct impact of improving cost containment as well as quality of care and ultimately saving money for the state and employers. In commercial environments, MCOs are tasked with curating such provider networks. MCOs in Ohio's workers' compensation system could pattern their provider network development after the commercial sphere. This would require a change to the Ohio Administrative Code regarding employee choice of provider in order to be more in line with traditional managed care environments.

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# Appendices

DXC Deliverable Appendices for  
The Ohio Bureau of Workers' Compensation  
**Managed Care Organization Impact Study**  
RFP DABWC-18-EP-002

12<sup>th</sup> December, 2018

# 1 DELIVERABLE 1 APPENDICES

## 1.1 Appendix 1A: Trends in Claims Excluded from Episode Analysis

Overall, there has been a reduction in both the number and average costs of claims that were non-medical claims.

2014 to 2017 change  EPISODE	Row labels	Average reduction of episode medical spend	Average reduction in number of episodes	Annual cumulative reduction in costs
Knee Arthroscopy	KA Overall (MD + LT)	-\$119.00	-448	\$53,312.00
	losttm (LT)	-\$751.00	-438	\$328,938.00
	medonly (md)	\$513.00	-10	-\$5,130.00
Low Back Pain	LBP Overall (MD + LT)	-\$353.00	-6423	\$2,267,319.00
	losttm (LT)	-\$796.00	-2687	\$2,138,852.00
	medonly (md)	\$90.00	-3736	-\$336,240.00
Shoulder	SHLD Overall (MD + LT)	-\$11,197.00	-1974	\$22,102,878.00
	losttm (LT)	-\$21,813.00	-1566	\$34,159,158.00
	medonly (md)	-\$581.00	-408	\$237,048.00

## 1.2 Appendix 1B: Episode Trigger Codes

### *Dimension 1 Trigger Codes*

Episode	Code	Code Type
Low Back Pain	M2578	ICD-10 Dx
Low Back Pain	M4320	ICD-10 Dx
Low Back Pain	M4326	ICD-10 Dx
Low Back Pain	M4327	ICD-10 Dx
Low Back Pain	M4328	ICD-10 Dx
Low Back Pain	M438X9	ICD-10 Dx
Low Back Pain	M4710	ICD-10 Dx
Low Back Pain	M4720	ICD-10 Dx
Low Back Pain	M4726	ICD-10 Dx
Low Back Pain	M4727	ICD-10 Dx
Low Back Pain	M4728	ICD-10 Dx
Low Back Pain	M47816	ICD-10 Dx
Low Back Pain	M47817	ICD-10 Dx
Low Back Pain	M47818	ICD-10 Dx
Low Back Pain	M47819	ICD-10 Dx
Low Back Pain	M47896	ICD-10 Dx
Low Back Pain	M47897	ICD-10 Dx
Low Back Pain	M47898	ICD-10 Dx
Low Back Pain	M47899	ICD-10 Dx
Low Back Pain	M479	ICD-10 Dx
Low Back Pain	M4800	ICD-10 Dx
Low Back Pain	M4806	ICD-10 Dx
Low Back Pain	M4807	ICD-10 Dx
Low Back Pain	M4808	ICD-10 Dx
Low Back Pain	M4820	ICD-10 Dx
Low Back Pain	M4824	ICD-10 Dx
Low Back Pain	M4826	ICD-10 Dx
Low Back Pain	M4827	ICD-10 Dx
Low Back Pain	M489	ICD-10 Dx
Low Back Pain	M5114	ICD-10 Dx
Low Back Pain	M5116	ICD-10 Dx
Low Back Pain	M5117	ICD-10 Dx
Low Back Pain	M5126	ICD-10 Dx
Low Back Pain	M5127	ICD-10 Dx

Low Back Pain	M5134	ICD-10 Dx
Low Back Pain	M5135	ICD-10 Dx
Low Back Pain	M5136	ICD-10 Dx
Low Back Pain	M5137	ICD-10 Dx
Low Back Pain	M5380	ICD-10 Dx
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Low Back Pain	M539	ICD-10 Dx
Low Back Pain	M5404	ICD-10 Dx
Low Back Pain	M5406	ICD-10 Dx
Low Back Pain	M5407	ICD-10 Dx
Low Back Pain	M5408	ICD-10 Dx
Low Back Pain	M5409	ICD-10 Dx
Low Back Pain	M5414	ICD-10 Dx
Low Back Pain	M5416	ICD-10 Dx
Low Back Pain	M5417	ICD-10 Dx
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Low Back Pain	M5431	ICD-10 Dx
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Low Back Pain	M5441	ICD-10 Dx
Low Back Pain	M5442	ICD-10 Dx
Low Back Pain	M545	ICD-10 Dx
Low Back Pain	M5489	ICD-10 Dx
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Low Back Pain	M62830	ICD-10 Dx
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Low Back Pain	M9925	ICD-10 Dx
Low Back Pain	M9926	ICD-10 Dx
Low Back Pain	M9929	ICD-10 Dx
Low Back Pain	M9933	ICD-10 Dx
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Low Back Pain	S335XXS	ICD-10 Dx
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Low Back Pain	S336XXD	ICD-10 Dx
Low Back Pain	S336XXS	ICD-10 Dx
Low Back Pain	S338XXA	ICD-10 Dx
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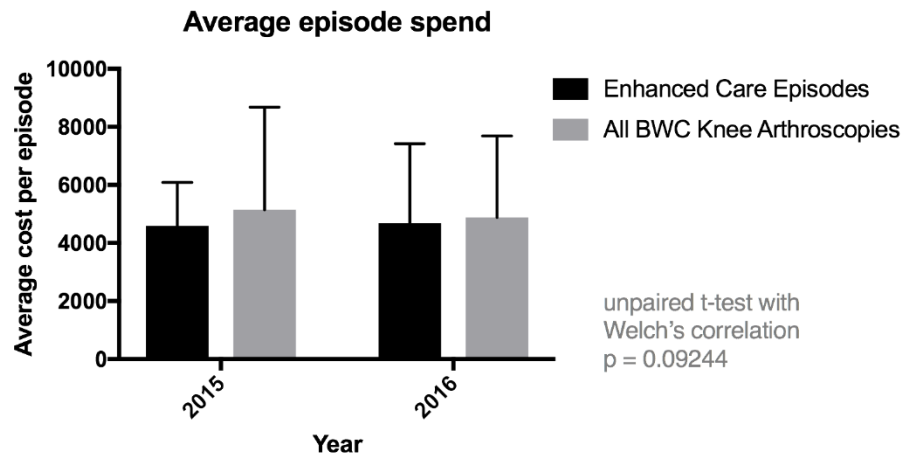


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## 1.3 Appendix 1C: Evaluation of Enhanced Care Program

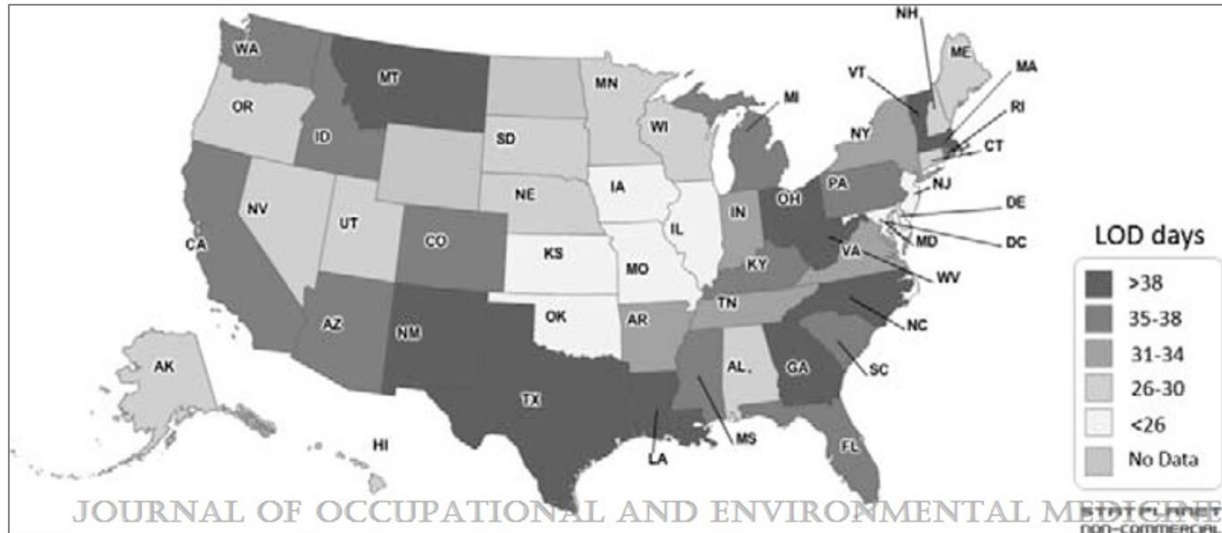
Although there is a clear pattern among participants in the enhanced care program (ECP) seemingly demonstrating a trend toward improved outcomes, the data do not yet reach statistical significance due to the small number of existing participants and the fact that ECP participants were available for analysis in the years 2015 and 2016 only. For this reason, the analysis of this program is included in the appendix instead of the body of the deliverable report. In order to evaluate the potential impacts of the ECP program, ECP participant claim numbers were identified by the BWC and examined as compared to two control groups: 1) participants with similar claims who were eligible for participation but did not enroll and 2) all knee arthroscopy claims in the same year (excluding claims that fell into the ECP or ECP comparison group). Subsequent to completion of the analysis, it was reported that medical spend for ECP may be incorrect as some bills did not include the 15% extra for E&M visits and some facility bills did. However, in spite of the small sample size and data limitations, there appears to be a trend among the ECP program participants of improved outcomes relative to either control group studied including an expedited return to work and reduction in total episode spend. At present, the BWC is in the process of expanding this program, which will permit inclusion of new participants at a greater rate. We recommend that this program be re-evaluated over the next 2-5 years to identify potential improvements associated with participation in the program once there are a greater number of participants having completed it.



## 1.4 Appendix 1F: Reference Materials Included

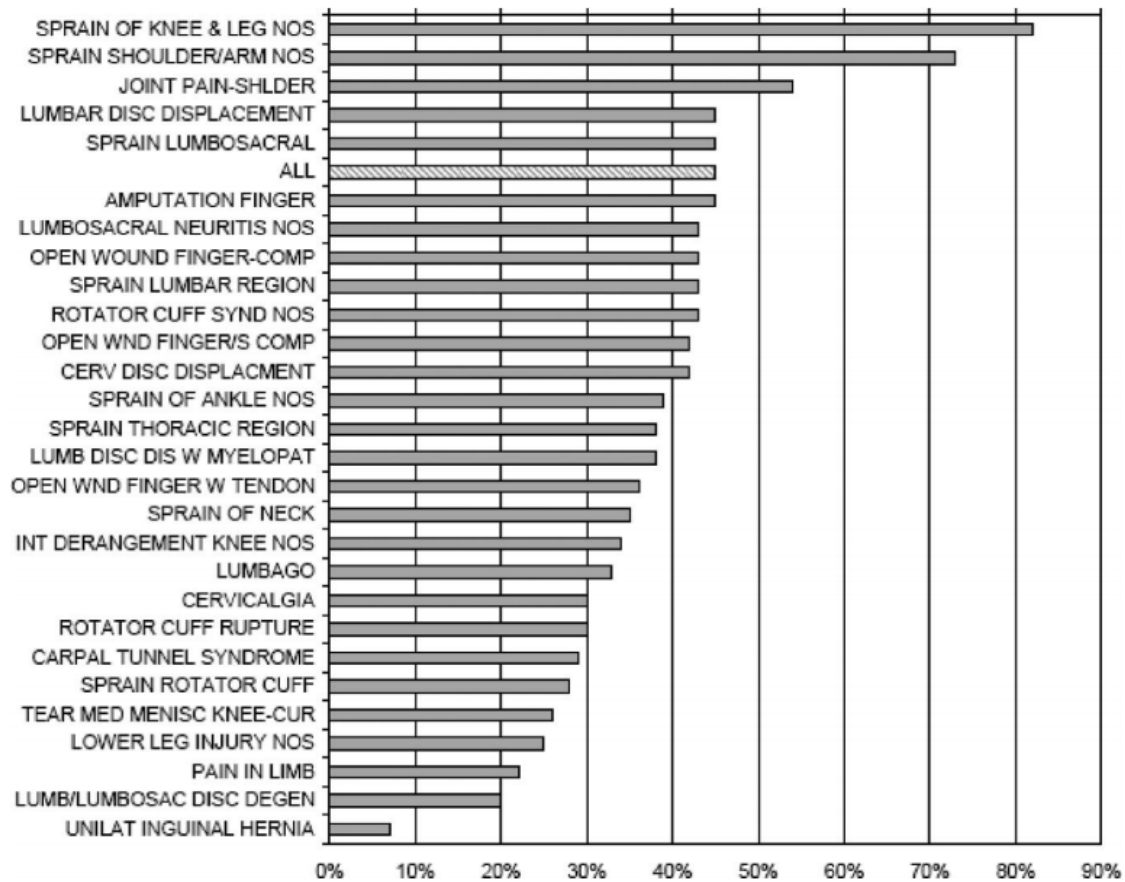
Journal of Occupational and Environmental Medicine 57(12):1275-1283,  
December 2015.doi: 10.1097/JOM.0000000000000593

Adjusted\* mean disability days, censored at 1-year, of workers with low back pain 2002-2008 (n=59,360). \*Mean disability days are adjusted for age, sex, tenure, average weekly wage, industry type, injury severity, early opioid prescribing, early lumbar spine magnetic resonance imaging, lumbar spine surgery, claim litigation status, and whether or not the employee works and resides in the same state.



Adjusted\* mean medical costs, censored at 1-year, for workers with low back pain 2002-2008 (n=59,360). \*Mean medical costs are adjusted for age, sex, tenure, average weekly wage, industry type, injury severity, early opioid prescribing, early lumbar spine magnetic resonance imaging, lumbar spine surgery, claim litigation status, and whether or not the employee works and resides in the same state.





JOEM, Volume 51, number 2, February, 2009:

Increase in number of treatments per claim by diagnosis code, accident years 2001–2002 over 1996 – 1997. The largest increases in the average number of treatments per claim were physical therapy (up 67%), complex surgery and anesthesia (60%), and complex diagnostic testing (57%) <sup>1</sup>

***Distribution of low back pain cases by state 2002-2008, with means and medians of medical costs and length of disability. JOEM, Volume 57, number 12, February, 2015:***

***\*\*Data in referenced publication and table below are not extracted from BWC claims***

Claimant residential state	Number of cases	Percent	Median medical costs (US \$)	Median length of disability (days)
TX	4774	8.04	\$8,044.00	98
LA	648	1.09	\$7,061.00	104
WV	108	0.18	\$6,690.00	97
IL	3399	5.73	\$5,997.00	42
NM	189	0.32	\$5,976.00	71
AK	182	0.31	\$5,656.00	33


MS	705	1.19	\$5,182.00	63
OK	803	1.35	\$5,098.00	56
AL	735	1.24	\$4,883.00	44
KS	621	1.05	\$4,871.00	45
ID	153	0.26	\$4,782.00	42
SC	853	1.44	\$4,772.00	63
CO	787	1.33	\$4,645.00	44
GA	1421	2.39	\$4,467.00	67
NE	462	0.78	\$4,411.00	35
DE	317	0.53	\$4,389.00	37
NV	327	0.55	\$4,359.00	37
WA	228	0.38	\$4,281.00	35
TN	1632	2.75	\$4,255.00	48
FL	3225	5.43	\$4,243.00	56
MO	1034	1.74	\$4,100.00	33
KY	993	1.67	\$4,041.00	46
PA	3069	5.17	\$4,027.00	42
AR	371	0.63	\$4,016.00	47
OH	343	0.58	\$3,971.00	50
IN	1561	2.63	\$3,970.00	37
NC	1887	3.18	\$3,964.00	56
CA	5855	9.86	\$3,934.00	38
AZ	684	1.15	\$3,715.00	41
SD	104	0.18	\$3,579.00	24
IA	681	1.15	\$3,493.00	29
MT	210	0.35	\$3,476.00	43
VA	1174	1.98	\$3,437.00	38
MI	1434	2.42	\$3,312.00	41
OR	554	0.93	\$3,034.00	33
NJ	1536	2.59	\$2,937.00	34
UT	409	0.69	\$2,835.00	28
MN	1437	2.42	\$2,773.00	26
WI	3633	6.12	\$2,724.00	24
NY	4905	8.26	\$2,668.00	48
NH	627	1.06	\$2,449.00	25

HI	330	0.56	\$2,387.00	22
MD	1064	1.79	\$2,251.00	33
DC	64	0.11	\$2,109.00	39
ME	160	0.27	\$2,048.00	27
VT	225	0.38	\$1,838.00	27
MA	1870	3.15	\$1,802.00	42
CT	1221	2.06	\$1,793.00	23
RI	356	0.6	\$1,554.00	34

## 2 DELIVERABLE 2 APPENDICES


### 2.1 APPENDIX 2A: Referenced data from Ohio BWC 2016 MCO report Card

2016 Ohio BWC MCO report card data depicting recent medical and days absent as referenced in the deliverable analysis examining performance evaluation methods.



MCO name	Number of policies	Number of claims	FROI timing	FROI turnaround	Days absent Statewide Average*	Recent medical Statewide Average*
1-888-OHIOCOMP	19,423	23,620	5.28	0.90	52.22	53.31
3-hab, Ltd.	7,149	12,613	7.05	1.77	51.95	53.39
AultComp MCO, Inc.	3,645	5,071	4.58	0.87	52.74	50.51
CareWorks	93,064	92,441	6.11	0.72	49.06	53.68
Comp One, Ltd.	2,003	2,062	8.08	1.29	54.23	56.03
CompManagement Health Systems, Inc.	29,368	55,356	5.86	0.86	49.34	53.11
Corvel Ohio MCO, Inc.	4,039	5,521	7.52	1.21	49.03	51.41
Genex Care for Ohio	2,220	2,075	7.67	1.05	49.22	48.14
Health Management Solutions, Inc.	15,720	19,633	7.23	1.57	54.92	50.05
Occupational Health Link, Inc.	3,844	4,161	6.48	0.93	51.36	51.33
Sheakley UNICOMP	27,199	37,832	6.88	0.99	49.52	53.50
Spooner Medical Administrators, Inc.	4,697	10,342	5.72	2.04	47.92	52.68
The Health Plan	3,379	3,150	6.22	1.05	49.93	52.50
University Hospitals CompCare	4,012	4,410	6.40	1.13	46.59	49.51
WorkStar Health Services, Inc.	2,032	3,228	6.41	0.82	44.05	46.29
<b>Statewide Average</b>			<b>6.50</b>	<b>1.15</b>	<b>49.88</b>	<b>52.93</b>

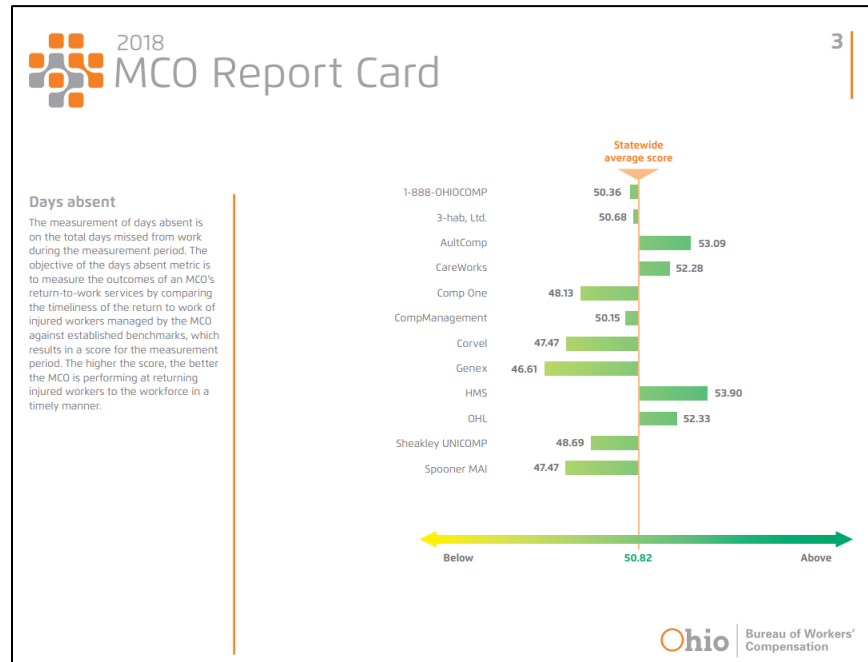
\*The dashed lines above represent the statewide average





## 2.2 Appendix 2A: Referenced updates to 2018 Ohio BWC Report Card Performance Outcomes Data Visualizations

Comparison of updates made between 2017 (above) and 2018 (below, days absent panel). The updated 2018 report card was released while this study was in progress. Updates to data visualizations that are reflected on the 2018 report cards are more intuitive and are accompanied by improved text descriptions of data interpretation.



**2017 MCO Report Card**

MCO name	Number of policies	Number of claims	FROI timing	FROI turnaround	Days absent Statewide Average*	Recent medical Statewide Average*
1-888-OHIOCOMP	22,405	23,677	5.46	0.97	50.20	53.30
3-hab, Ltd.	7,211	12,029	5.93	1.52	50.63	52.71
AultComp MCO, Inc.	3,863	4,121	5.06	1.36	54.17	50.49
CareWorks	90,548	83,341	5.91	0.71	49.93	54.30
Comp One, Ltd.	2,080	2,259	8.92	1.46	50.30	58.01
CompManagement Health Systems, Inc.	30,036	53,835	5.70	0.83	49.95	53.85
Corvel Ohio MCO, Inc.	4,410	4,635	7.65	1.48	45.94	51.44
Genex Care for Ohio	2,453	1,541	6.22	0.89	51.58	49.30
Health Management Solutions, Inc.	15,568	18,277	6.97	1.49	54.78	50.22
Occupational Health Link, Inc.	3,921	3,669	8.12	1.23	49.23	52.48
Sheakley UNICOMP	25,973	34,251	6.51	1.13	47.44	53.63
Spooner Medical Administrators, Inc.	5,551	10,577	5.65	1.45	49.95	54.54
The Health Plan	3,472	2,672	5.25	0.73	48.63	50.17
WorkStar Health Services, Inc.	2,185	2,832	7.12	1.98	49.06	49.57
<b>Statewide Average</b>			<b>6.06</b>	<b>0.97</b>	<b>49.94</b>	<b>53.37</b>

\*The scores/turns above represent the statewide average.

Ohio Bureau of Workers' Compensation